Canon

PUB. DIE-0494-000

EOS C700
EOS C700 PL
EOS C700 GS PL

Digital Cinema Camera

Instruction Manual

Important Usage Instructions

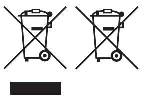
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CAN ICES-3(A)/NMB-3(A)

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Highlights of the Camera

The Canon Digital Cinema Camera EOS C700 / EOS C700 PL / EOS C700 GS PL has been designed to meet the demanding needs and highest expectations of industry professionals. The following are just some of the many features that will help turn your creative vision into reality.

4K Recording System with Cinema Quality

Advanced 4K-compatible sensor

The camera features a Super 35mm-equivalent CMOS sensor (C700 PL C700 GS PL) or a Super 35mm-equivalent CMOS sensor with global electronic shutter (C700 GS PL). With the new sensor's effective pixel count of 8.85 megapixels (4096x2160) and the new Triple DIGIC DV5 imaging engine, the camera offers a center resolution of 1,800 TV lines[1]. Thanks to Canon's high sensitivity and low-noise technology, the camera can record at a wide range of sensitivity settings, from ISO 160 to ISO 25600[2]. Using one of the Canon Log gamma curves you can make the most of the image sensor's characteristics to obtain a very wide dynamic range.

1 Varies depending on the lens used.
2 With the C700 or C700 PL model. When slow & fast motion recording is not activated, the ISO speed range can be extended to ISO 100 (C700 C700 PL) or ISO 200 (C700 GS PL) on one end, and ISO 102400 on the other.

Interchangeable lenses

With three models featuring different lens mounts and shutter mechanisms, the camera offers the freedom to use the lens you want in order to achieve exactly the look you want. With the model featuring an EF lens mount (C700), you can use over 100 high-quality lenses from Canon's EF and EF Cinema lens series. Whereas the models featuring a PL lens mount (C700 PL C700 GS PL) let you use a variety of industry-standard PL lenses.
Using the global shutter model (C700 GS PL), you can shoot fast-moving subjects without worrying about rolling shutter distortions or artifacts. And using compatible broadcast lenses[3] and EF Cinema lenses (📖 221), you will be able to control the aperture and zoom using the camera[4]. The camera also supports the use of anamorphic lenses (📖 122).

3 The optional MO-4E or MO-4P B4 Mount Adapter is required.
4 Depending on the lens used, you may need to connect the 12-pin camera interface cable to the camera.

Choose your format – XF-AVC or ProRes

Using the XF-AVC format, the camera can use two codecs (H.264 Intra-frame and H.264 Long GOP) so you can select the video configuration from YCbCr 4:2:2, 10 bit, RGB 4:4:4, 10 or 12 bit, or YCbCr 4:2:0, 8 bit, to suit your creative needs. Using Apple's ProRes format, you have the choice between the 10-bit ProRes 422 HQ codec and the 12-bit ProRes 4444 codec.

4K video RAW recording and output

You can use a recorder docked with the camera[5] or an external recorder connected to the camera's SDI OUT terminals (📖 152) to record RAW 4K video. At the same time, you can apply a LUT that meets the ACES standard to video output from the MON. terminals or the HDMI OUT terminal to use this video output for on-set color grading (📖 22).

5 For details about docking the CDX-36150 Recorder with the camera and using it to record, refer to *Codex Recorder – Guide for the EOS C700 models* (separate PDF file).

Recording media

The camera features two CFast card slots and an SD card slot. It records main recording clips (XF-AVC or ProRes) on the CFast cards. When you insert two CFast cards in the camera, the camera can record simultaneously on both cards (double slot recording), or it can switch automatically to recording on the other CFast card when a CFast card becomes full (relay recording) (📖 52). In addition to the main recording, you can activate the simultaneous sub recording (📖 71). Sub recording clips can be recorded on the CFast card (XF-AVC Intra) or on the SD card (XF-AVC Proxy).

Operability and Adaptability

Expandable modular design

The sturdy camera body was designed with ease of use and expandability in mind. It features a multitude of screw holes of different diameters on its top and bottom plates to offer a large number of options for attaching additional accessories to the camera.
Using the optional EVF-V70 OLED Electronic Viewfinder (17 mm (0.7 in.), 1920x1080 pixels/ approx. 6.22 million dots), OU-700 Remote Operation Unit, SU-15 Shoulder Support Unit and SG-1 Shoulder Style Grip Unit, you can quickly optimize the camera for one-person operation or for team operation from both sides, depending on your needs (📖 38).
The camera offers assignable buttons and a customizable USER screen (using the screen buttons) that you can customize to your preferences from a large number of convenient functions (📖 127). Optional accessories offer additional assignable buttons. Assign functions that you use often to the assignable buttons you find most

convenient to personalize the camera to your needs and preferences.

Power options
You can power the camera using commercially available V-mount batteries or power sources connected to the DC IN 12V terminal (XLR 4-pin jack) (□ 26). The camera also offers power outputs (24 V DC, 12 V DC or D-Tap) to supply power to connected accessories (□ 28).

Remote operation
You can attach the optional RC-V100 Remote Controller to the camera to control it from a distance. The remote controller lets you control a wide range of camera settings (□ 123).
Connect the camera to a network (Wi-Fi[6] or wired) to operate it remotely from a network device using the Browser Remote application (□ 166). Browser Remote lets you check the live view image from the camera, adjust main camera settings and change the metadata embedded with XF-AVC clips.

[6] The optional WFT-E6 or WFT-E8 Wireless File Transmitter is required.

Versatile Artistic Expression

Slow & fast motion (□ 68)
Change the shooting frame rate to create a slow motion effect (up to 1/10 of the normal speed) or fast motion effect (up to 60x the normal speed).

Custom picture settings
Select one of the preset color settings or set the combination of gamma curve, color space and color matrix that you wish to use. Then, you can adjust a number of other image-related parameters in detail. With wide color space options such as BT.2020 Gamut and Cinema Gamut, and the new Canon Log 3 gamma curve, which keeps the characteristics of the Canon Log gamma while expanding the dynamic range, you can be sure that the camera covers your creative needs.

Other Functions

IP streaming and FTP transfer
Connect the camera to a network (Wi-Fi[7] or wired) to stream live transmissions or breaking images via IP and to transfer sub recordings (XF-AVC Proxy clips) from the SD card to a remote server using the FTP protocol.

[7] The optional WFT-E6 or WFT-E8 Wireless File Transmitter is required.

Software for aiding production workflow
Canon XF Utility (□ 158) lets you copy the XF-AVC clips you recorded from your recording media to a computer, play back the clips and organize them. Cinema RAW Development (□ 158) can develop the RAW data recorded with an external recorder and export it as a standard file type such as DPX or OpenEXR. You can also import an EDL to recreate an edit created on NLE software. This helps make a smooth transition to the color grading process.

Dual Pixel CMOS AF and autofocus functions (C700 only)
The camera features Dual Pixel CMOS AF technology, which covers almost 80% of the 2K or 4K recording area, and offers various autofocus functions (□ 89): continuous AF, one-shot AF (to use autofocus only when you choose) or AF-boosted MF (to let you focus manually most of the way and let the camera finish focusing automatically). Using AF-boosted MF the camera does not perform unreliable focus adjustments, resulting in a smoother focusing operation than with continuous AF.
C700 The camera also features face detection (□ 96), tracking of moving subjects (□ 97) and the Dual Pixel Focus Guide function (□ 90), a visual, intuitive guide that you can use to check if the image is in focus. This can be very helpful to ensure you always get amazingly sharp 4K video.

Assistance functions
The camera offers a number of assistance functions, such as peaking and magnification (□ 90), onscreen markers (□ 98), zebra patterns (□ 99), B&W image (□ 190), false color display (□ 100) and waveform monitor (□ 115) that you can display on an optional viewfinder or on external monitors connected to the MON. terminals or HDMI OUT terminal. When using a logarithmic gamma curve, you can also apply a LUT (□ 154) for easier monitoring.

Other improved features

- Five levels of ND filter (□ 78).
- C700 C700 PL Flash band correction (□ 75).
- In-camera correction for peripheral illumination and chromatic aberration (□ 47).
- Built-in level (electronic horizon) (□ 40).
- Illuminated buttons for night time or black-out operation.
- Monaural built-in microphone for note taking.
- Customizable onscreen displays (□ 139).
- Three sets of customizable My Menu submenus (□ 35).
- Menu settings file that can be saved in the camera or on an SD card to restore all the menu settings or replicate them perfectly on another C700 series camera (□ 140).
- Improved clip name format with more information for easier identification and organization of clips (□ 62).
- Metadata and geotagging (□ 118, 120, 176).

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1 Introduction

About this Manual

Thank you for purchasing the Canon EOS C700 / EOS C700 PL / EOS C700 GS PL. Please read this manual carefully before you use the camera and retain it for future reference. Should the camera fail to operate correctly, refer to *Troubleshooting* (📖 201).

Conventions Used in this Manual

- ❗ IMPORTANT: Precautions related to the camera's operation.
- ⓘ NOTES: Additional topics that complement the basic operating procedures.
- 📖: Reference page number.
- **C700 PL** **C700 GS PL** : Text that applies only to the model shown in the icon.
- The following terms are used in this manual.

  "Monitoring screen" refers to the screen of a monitoring device (either the optional EVF-V70 OLED Electronic Viewfinder or an external monitor connected to one of the camera's MON. terminals or HDMI OUT terminal).

  "SD card" refers to an SD, SDHC or SDXC memory card.

  "Recording media" refers to CFast cards, SD cards and Codex Capture Drive 2.0 media.
- "The optional viewfinder" refers to the optional EVF-V70 OLED Electronic Viewfinder.
- "CDX-36150 Recorder" refers to the CDX-36150 Codex Recorder for Canon EOS C700.
- Photographs in the manual are simulated pictures taken with a still camera. Some screenshots have been altered to make them easier to read.
- Illustrations in the manual show the Canon EOS C700 camera with a Canon EF 50mm f/1.4 USM lens attached.
- The following style is used to represent menu selections. The first word (in the thick, bold typeface) indicates the button you need to press on the camera (in the case of "EVF", on an optional EVF-V70 OLED Electronic Viewfinder connected to the camera) to open the required menu. For a detailed explanation on how to use the menus, refer to *Using the Menus* (📖 32). For a summary of all available menu options and settings, refer to the appendix *Setup Screens and Menu Options* (📖 183).

Selecting the Main Recording Format

1 Open the [Main Rec Format] submenu.

MENU/EVF ▸ [Rec/Media Setup] (📹) ❯ [Main Rec Format]

- Alternatively, from the camera menu: **HOME** ▸ [S&F FPS] ❯ [OPTIONS] ❯ [Main Rec Format].

2 Select [XF-AVC (CFast)] or [ProRes (CFast)] and then press SET.

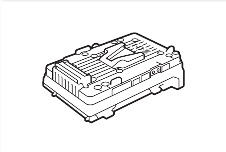
This indicates to press the MENU button on the camera or EVF button on the optional viewfinder.

Brackets [ ] indicate text as it appears on the camera's control display or on the screen of a monitoring device.

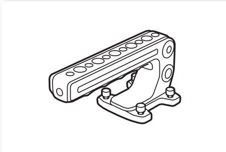
This arrow indicates a deeper level in the menu hierarchy or the next step in a procedure.

Supplied Accessories

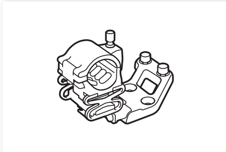
The following accessories are supplied with the camera.



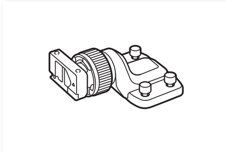
Battery Adapter for V-Mount Batteries[1]



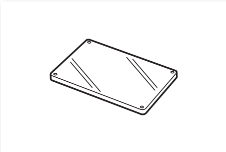
Handle Unit



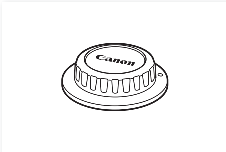
Microphone Holder



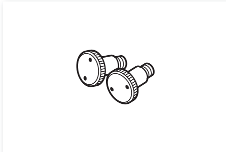
Clamp Base



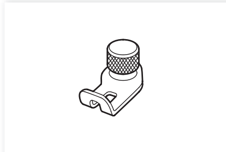
Control Display Cover[1]



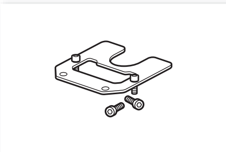
Body Cap[1]



Tape Measure Hooks[1] (x 2)



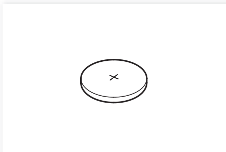
Extension Unit Attachment Bracket[2]



Reinforcement Plate for the CDX-36150 Recorder[3] including 0.64 cm, 1/4" fixation screws (x 2)



Hex Wrenches (x 2) (for 0.64 cm, 1/4" screws/ for M4 bolts)



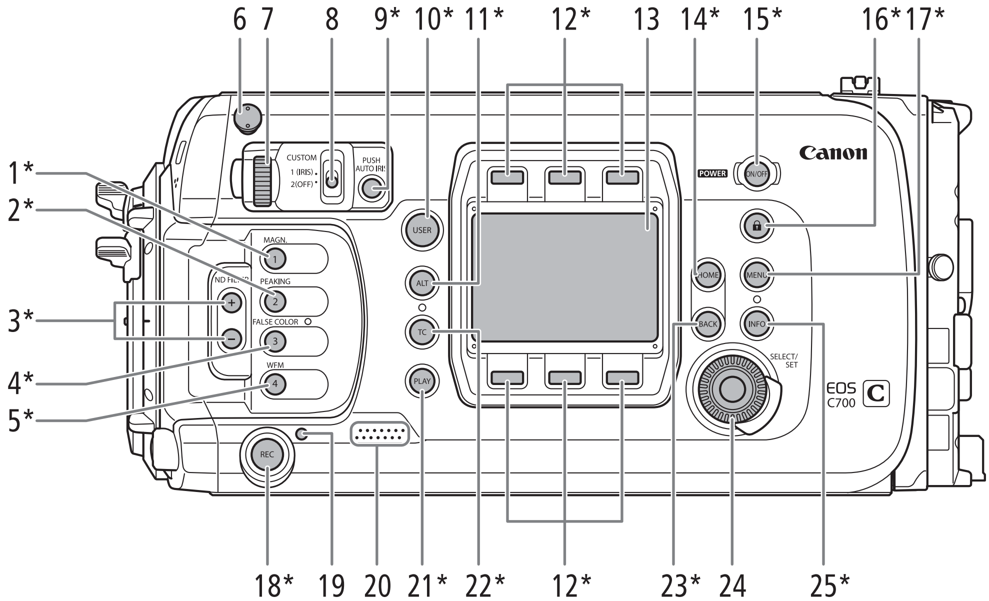
CR2025 Lithium Button Battery



Rubber Anti-Slip Feet (x 4)

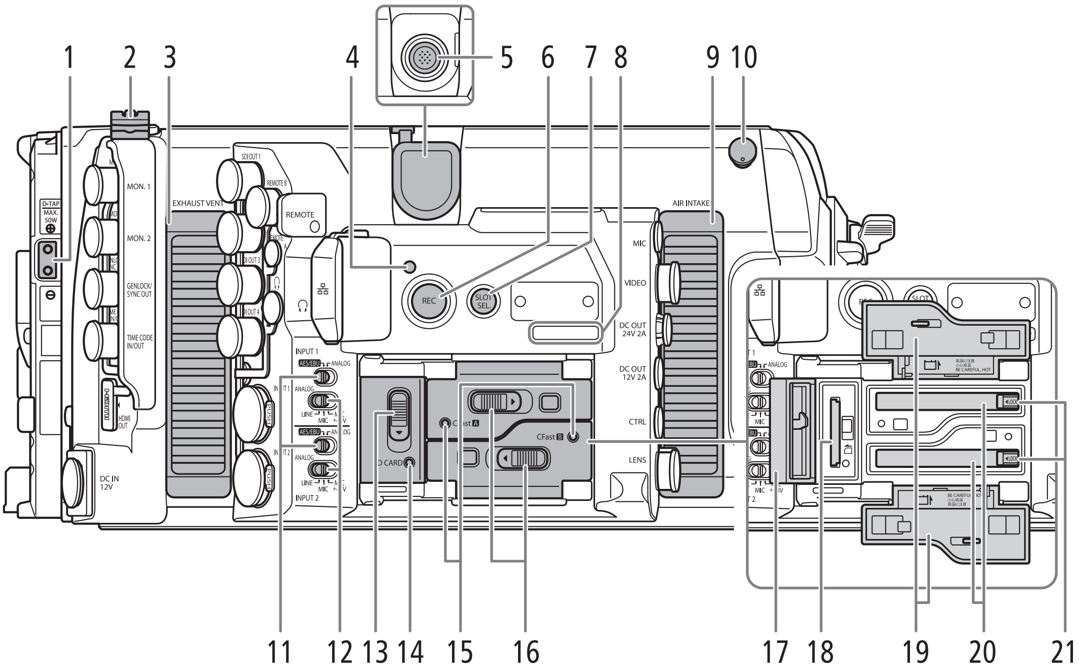
[1] Comes pre-attached to the camera.
[2] Used to secure the optional WFT-E6 or WFT-E8 Wireless File Transmitter or optional GP-E1 GPS Receiver when it is attached to the camera.
[3] Used to secure the CDX-36150 Codex Recorder for Canon EOS C700 when it is docked with the camera.

Names of Parts

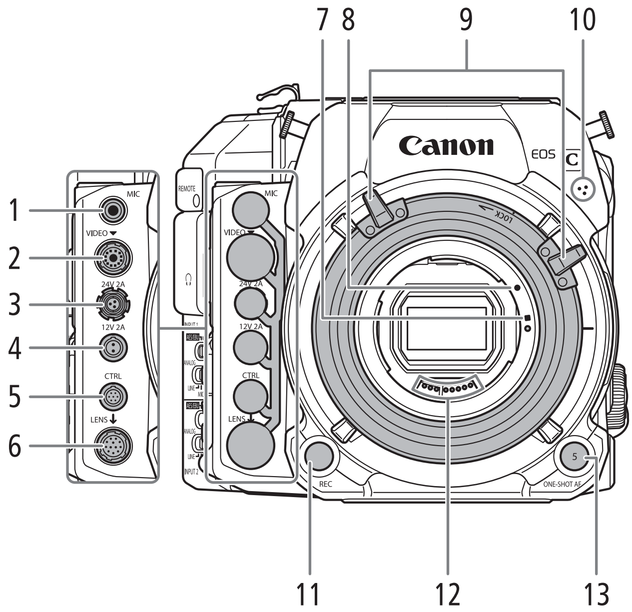


* Illuminated buttons (□ 194).

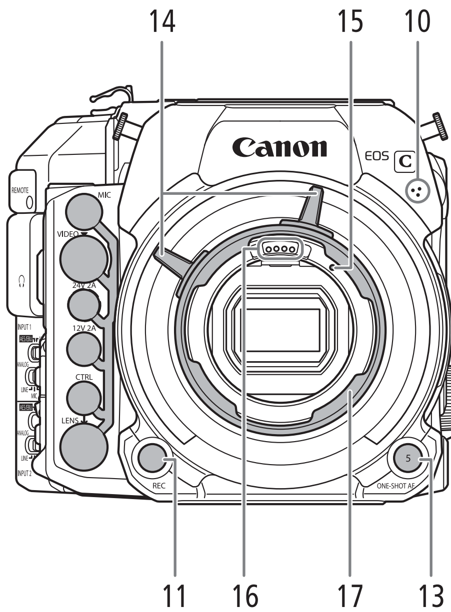
1 MAGN. (magnification) button (□ 92)/
Assignable button Camera 1 (□ 127)
2 PEAKING button (□ 91)/
Assignable button Camera 2 (□ 127)
3 ND FILTER +/– buttons (□ 78)
4 FALSE COLOR button (□ 100)/
Assignable button Camera 3 (□ 127)
5 WFM (waveform monitor) button (□ 115)/
Assignable button Camera 4 (□ 127)
6 Tape measure hook and ϕ focal plane mark
7 Control dial (□ 77, 80)
8 CUSTOM (customize the control dial's function) switch (□ 77)
9 PUSH AUTO IRIS (momentary automatic aperture) button (□ 81)
10 USER (user-defined setup screen) button (□ 130)
11 ALT (alternative setup screen) button (□ 184)
12 Screen buttons (□ 30)
13 Control display (□ 30)
14 HOME (home setup screen) button (□ 30, 183)
15 POWER button (□ 28)
16 🔒 (key lock) button (□ 56)
17 MENU (camera menu) button (□ 32)
18 REC (start/stop recording) button (□ 55)
19 Tally lamp (□ 55)
20 Speaker (□ 56)
21 PLAY (playback mode) button (□ 141)
22 TC (time code) button (□ 101, 185)
23 BACK (go back to previous screen) button (□ 30, 32)
24 SELECT dial/SET button (□ 30, 32)
25 INFO (information screens) button (□ 198)



1 D-TAP terminal (📖 28)
2 Cable clamp
3 Exhaust ventilation outlet (📖 64)
4 Tally lamp (📖 55)
5 System extension terminal (📖 120, 160)
6 REC (start/stop recording) button (📖 55)
7 SLOT SEL. (CFast card selection) button (📖 52, 142)
8 Serial number
9 Air intake vent (📖 64)
10 Tape measure hook and ϕ focal plane mark
11 Audio input selection switches: for INPUT 1 (top), for INPUT 2 (bottom) (📖 108, 110)
12 ANALOG (analog audio source selection) switches: for INPUT 1 (top), for INPUT 2 (bottom) (📖 108, 110)
13 SD card slot cover switch (📖 50)
14 SD CARD access indicator (📖 50)
15 CFast [A] (CFast card slot A) and CFast [B] (CFast card slot B) access indicators (📖 49)
16 CFast card slot cover switches: for CFast [A] (top), for CFast [B] (bottom) (📖 49)
17 SD card slot cover (📖 50)
18 SD card slot (📖 50)
19 CFast card slot covers: for CFast [A] (top), for CFast [B] (bottom)
20 CFast card slots: for CFast [A] (top), for CFast [B] (bottom) (📖 49)
21 CFast card release switches: for CFast [A] (top), for CFast [B] (bottom) (📖 49)



C700 **EF lens mount with Cinema Lock** (📖 44)



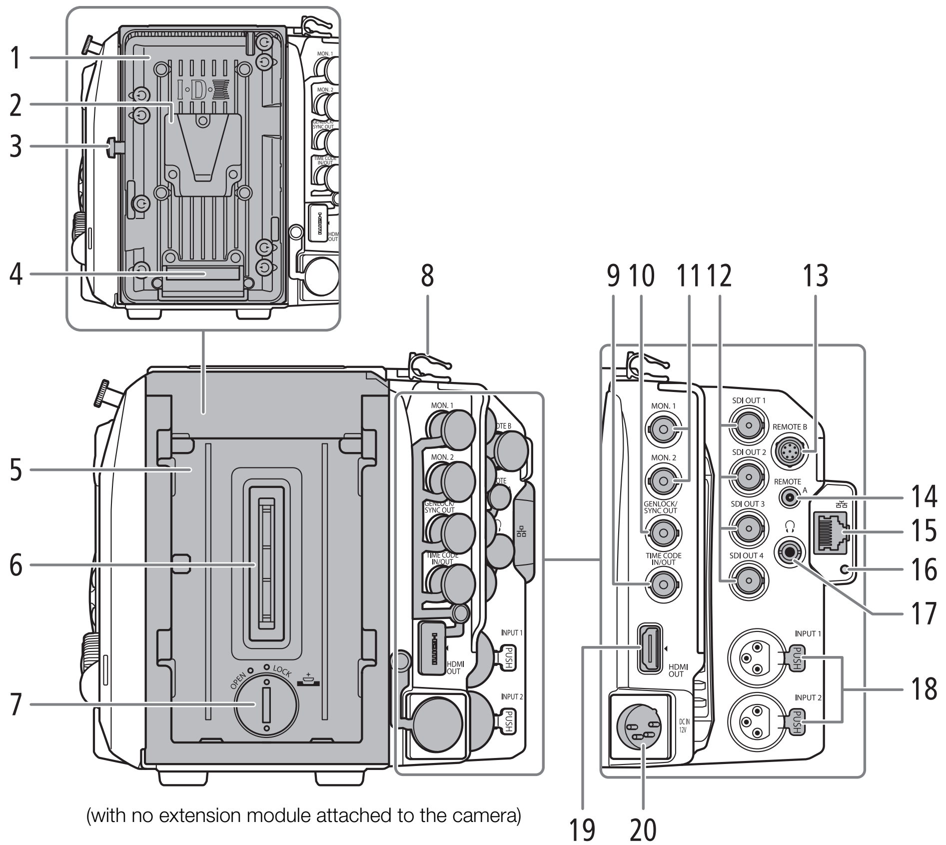
C700 PL C700 GS PL **PL lens mount** (📖 46)

1 MIC (microphone) terminal (📖 109)
2 VIDEO terminal (📖 41)
For connecting the optional EVF-V70 OLED Electronic Viewfinder.
3 DC OUT 24V 2A (power output) terminal (📖 28)
4 DC OUT 12V 2A (power output) terminal (📖 28)
5 CTRL (controller) terminal (📖 38)
For connecting the optional OU-700 Remote Operation Unit.
6 LENS terminal (📖 44)
7 EF-S lens mount index (📖 44)
8 EF lens mount index (📖 44)
9 Lens mount handles
10 Built-in monaural microphone (📖 110)
11 REC (start/stop recording) button (📖 55)
12 EF lens contacts (📖 44)
13 ONE-SHOT AF (focus automatically once) button (📖 92)/Assignable button Camera 5 (📖 127)
14 Bayonet ring handles
15 PL lens index pin (📖 46)
16 PL lens contacts (📖 46)
17 Bayonet ring

Removing and Attaching the Terminal Covers

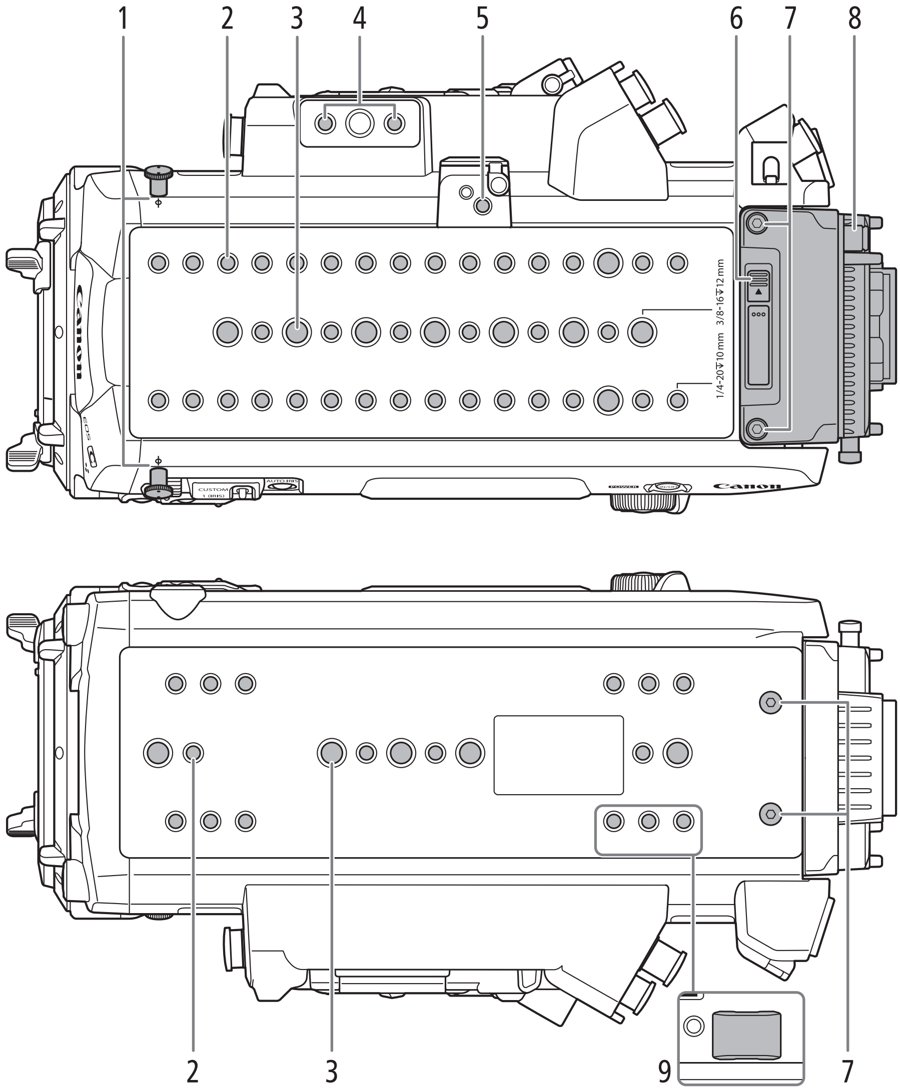
You can remove the covers of the camera’s terminals to access them more easily. The terminal cover of the terminals below the MIC terminal (on the camera’s front side) is common to all 6 terminals. Terminal covers for other terminals can be removed by removing the small screw using a Phillips head (“crosshead”) screwdriver. Be careful not to lose the terminal covers or fixation screws once removed.

(with the supplied battery adapter attached to the camera)



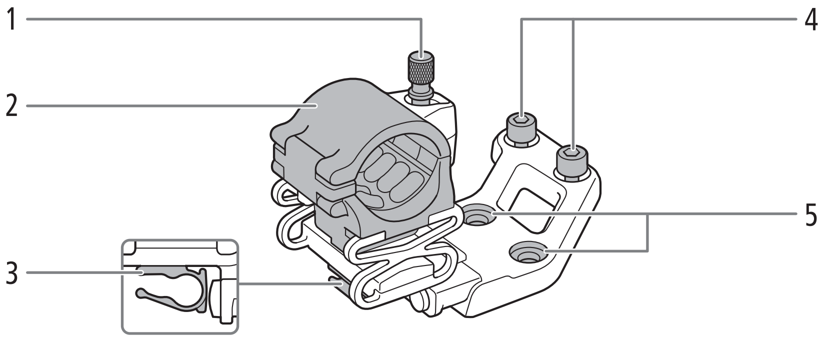
(with no extension module attached to the camera)

1 V-mount battery plate (🕮 26)
2 V-shaped battery mount (V-mount)
3 Battery release latch (🕮 26)
4 Battery contacts
5 Extension module mounting unit (🕮 23, 24)
6 Extension module connector
7 Compartment cover for the lithium button battery (🕮 24)
8 Cable clamp
9 TIME CODE IN/OUT terminal (🕮 105, 106, 107)
10 GENLOCK terminal (🕮 105, 106)/
SYNC OUT (synchronizing signal output) terminal (🕮 105, 107)
11 MON. terminals: MON. 1 (top), MON. 2 (bottom) (🕮 149, 153)
12 SDI OUT terminals: from top to bottom SDI OUT 1 to SDI OUT 4 (🕮 149, 152)
13 REMOTE B terminal
14 REMOTE A terminal
For connecting the optional RC-V100 Remote Controller (🕮 123) or commercially available remote controllers.
15 品 (Ethernet) terminal (🕮 164)
16 品 (Ethernet) indicator
17 🎧 (headphone) terminal (🕮 113, 143)
18 INPUT terminals (XLR): INPUT 1 (top), INPUT 2 (bottom) (🕮 109, 110)
19 HDMI OUT terminal (🕮 149, 153)
20 DC IN 12V terminal (🕮 27)



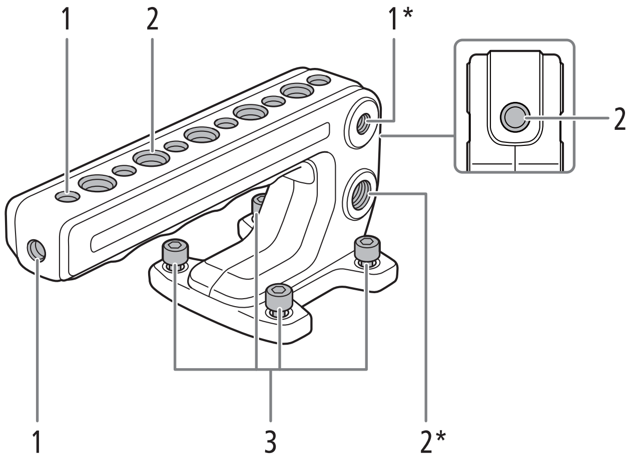
1 Tape measure hooks and ϕ focal plane marks
Use the hooks to accurately measure the distance from the focal plane.
2 Screw holes for 1/4"-20 mounting screws (10 mm (0.39 in.) deep)
Total of 36 on the top plate and 16 on the bottom plate.
3 Screw holes for 3/8"-16 mounting screws (12 mm (0.47 in.) deep)
Total of 10 on the top plate and 5 on the bottom plate.
4 Screw holes for 1/4"-20 mounting screws (10 mm (0.39 in.) deep)
Recommended mounting position for the optional OU-700 Remote Operation Unit.
5 Socket for the extension unit attachment bracket (🕮 120, 160)
6 Battery adapter release switch (🕮 23, 24)
7 Battery adapter's fixation screws (2 on the top plate, 2 on the bottom plate; M4) (🕮 23, 24)
8 Battery adapter for V-mount batteries (🕮 23, 24, 26)
9 Rubber anti-slip feet
The screw holes on the bottom can be used to attach the supplied rubber anti-slip feet as shown in the illustration.

Microphone Holder (📖 109)



1 Microphone lock screw
2 Microphone holder
3 Microphone cable clamp
4 Hex socket head fixation bolts (0.64 cm, 1/4"; 2 in total)
5 Through-holes for fixation bolts

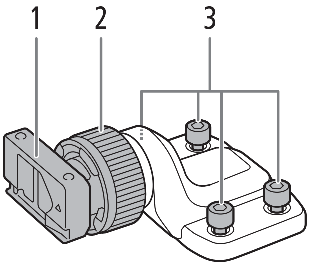
Handle Unit (📖 40)



* One more in the same location on the opposite side.

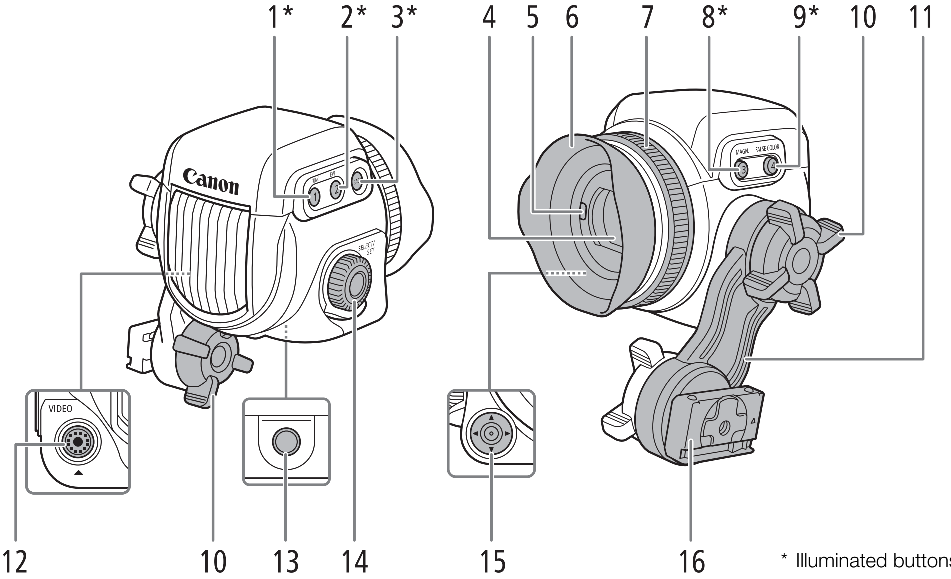
1 Screw holes for 1/4"-20 mounting screws (10 mm (0.39 in.) deep, 9 in total)
2 Screw holes for 3/8"-16 mounting screws (12 mm (0.47 in.) deep, 8 in total)
3 Hex socket head fixation bolts (0.64 cm, 1/4"; 4 in total)

Clamp Base (📖 41)



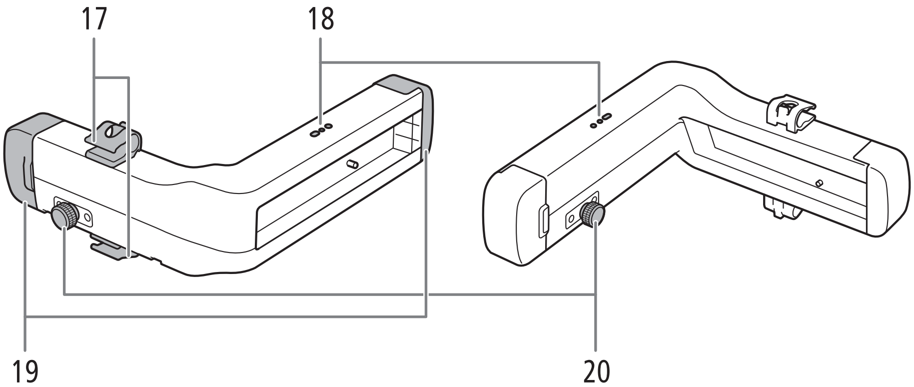
1 Slider for an optional viewfinder's clamp rail
2 Clamp rail locking screw
3 Hex socket head fixation bolts (0.64 cm, 1/4"; 4 in total)

EVF-V70 OLED Electronic Viewfinder (optional) (📖 41)



* Illuminated buttons (📖 194).

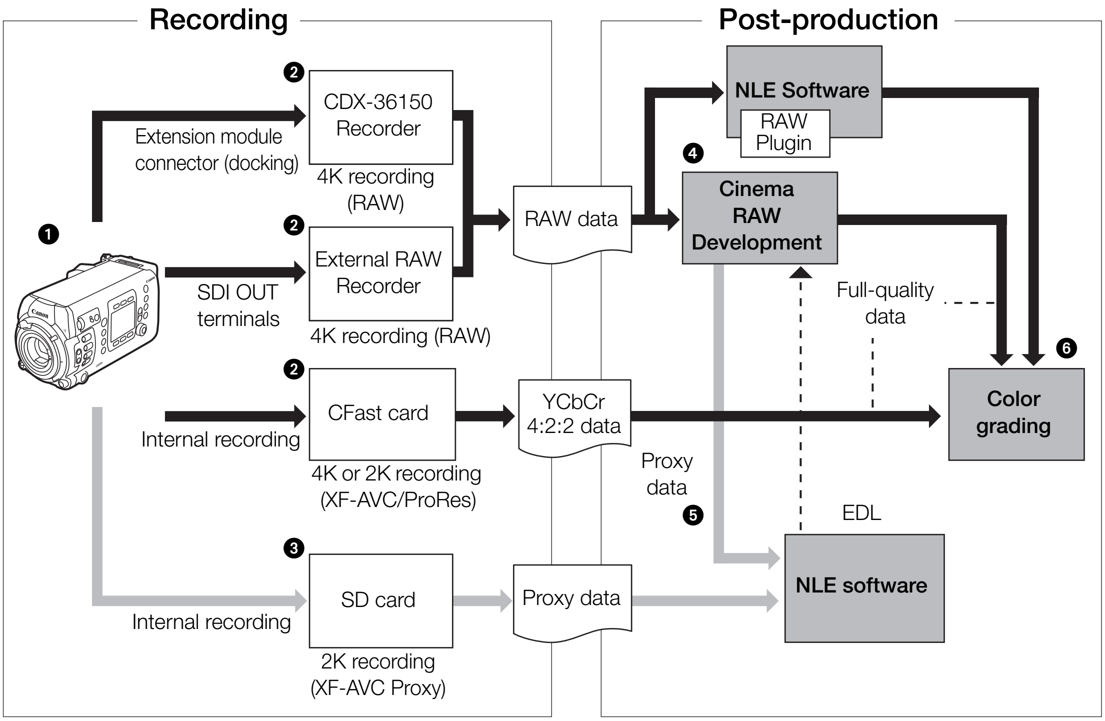
1 FUNC (main functions) button (📖 73)/ Assignable button EVF 1 (📖 127)
2 EVF (open the monitoring menu) button (📖 33, 186)/Assignable button EVF 2 (📖 127)
3 BACK (go back to previous screen) button (📖 30, 32)
4 Viewfinder (📖 41)
5 Eye sensor (📖 42)
6 Eyecup
7 Dioptric adjustment ring (📖 42)
8 MAGN. (magnification) button (📖 92)/ Assignable button EVF 3 (📖 127)
9 FALSE COLOR button (📖 100)/ Assignable button EVF 4 (📖 127)
10 Swing arm locking screw (📖 41)
11 Swing arm
12 VIDEO terminal (📖 42)
13 Screw hole for 1/4"-20 mounting screws (25 mm (0.98 in.) deep)
14 SELECT dial/SET button (📖 32)
15 Joystick (📖 32)/SET button (📖 32)
16 Swing arm slider (📖 41)



17 Clamp rail: cable clamps
18 Screw holes for the clamp rail’s cable clamps
19 Clamp rail: rail end caps (📖 41)
20 Clamp rail: slider locking pin (📖 43)

4K Workflow Overview

The following illustrates the typical 4K workflow for this camera.



❶ Shoot in 4K mode (📖 65).

❷ You can record RAW data on a CDX-36150 Recorder docked with the camera* or using an external RAW recorder connected to one of the camera's SDI OUT terminals (📖 152). You can also record Intra-frame (YCbCr 4:2:2) data (XF-AVC or ProRes format) on a CFast card in the camera.

❸ In addition to the main RAW recording, you can record simultaneously an additional sub recording in the camera (📖 71). You can use the CFast card (XF-AVC clips, 4K or 2K) or SD card (XF-AVC Proxy clips, 2K), depending on the type of sub recording clips you need or how you intend to use them in post-production.

❹ After recording RAW data, you can develop the RAW data using the Cinema RAW Development software (📖 158) to generate full-quality data. Using the Canon RAW Plugin, you can work with RAW recordings directly from supported NLE applications.

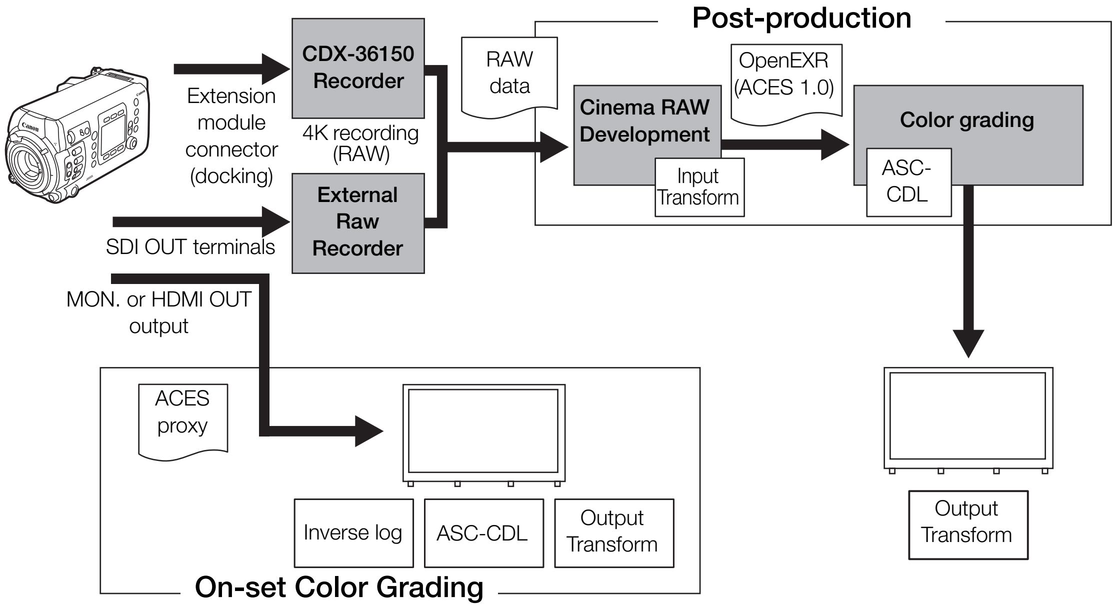
- You can also generate proxy data with the software.
- YCbCr 4:2:2 clips recorded on the CFast card can be treated as full-quality data without any additional processing.

❺ Transfer the 2K clips recorded in the camera, or proxy data generated by the software, to your NLE system and edit offline (📖 158).

❻ Perform color grading based on the full-quality data.

* For details about docking the CDX-36150 Recorder with the camera and using it to record, refer to *Codex Recorder – Guide for the EOS C700 models* (separate PDF file).

Color Grading with the ACES Workflow



ACESproxy: ACESproxy video data that is output from the MON. terminals or HDMI OUT terminal when performing on-set color grading. Select the [ACESproxy] option for the LUT setting of the appropriate terminal (📖 154) to enable ACESproxy output.

Input Transform: Refers to the table used for converting color information of the input device to ACES2065-1 color space.

Output Transform: Refers to the table used for mapping ACES2065-1 color space information to the specific color information scheme used by the display device.

ASC-CDL: Refers to the list that contains color grading adjustment data. This step requires equipment compatible with ASC-CDL.

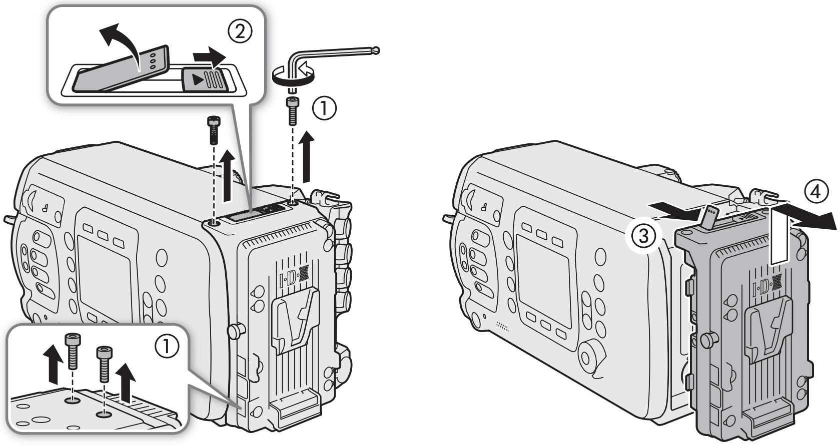
Preparing the Backup Battery

The camera uses a CR2025 lithium button battery as a backup battery to ensure that the camera's settings are not lost when no other power source is connected to the camera. To install the supplied lithium button battery, you will need to remove any extension modules attached to the camera*.

* The camera is shipped with the battery adapter for V-mount batteries attached.

Removing an Extension Module

The following procedure is explained using the battery adapter for V-mount batteries supplied with the camera as example.



1 Use the supplied hex wrench to remove the four fixation screws from the top and bottom of the battery adapter.

2 Slide the battery adapter release switch in the direction of the arrow.

- The locking lever will pop out.

3 Pull the locking lever all the way up and pull the top of the battery adapter away from the camera.

4 Lift up the battery adapter and remove it from the camera.

5 Push down the locking lever until it clicks.

Inserting the Lithium Button Battery

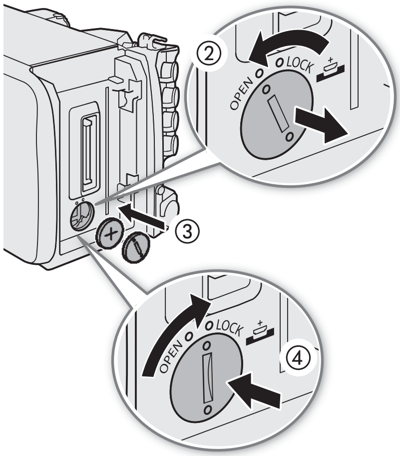
The camera features a built-in backup battery so the camera settings are not lost while you replace the lithium button battery.

1 Make sure no power supply is connected to the DC IN 12V terminal.

2 Turn the lithium battery compartment cover to the OPEN position and remove the cover.
- Use a coin or a similar tool. If you keep turning the cover beyond the OPEN point, the cover will rise a little, making it easier to grab.

3 Insert the supplied lithium button battery with the + side facing out.

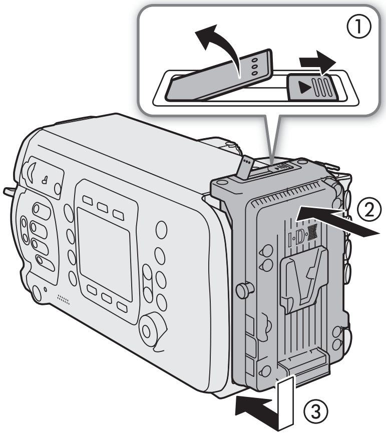
4 Replace the cover and turn it to the LOCK position to lock it.

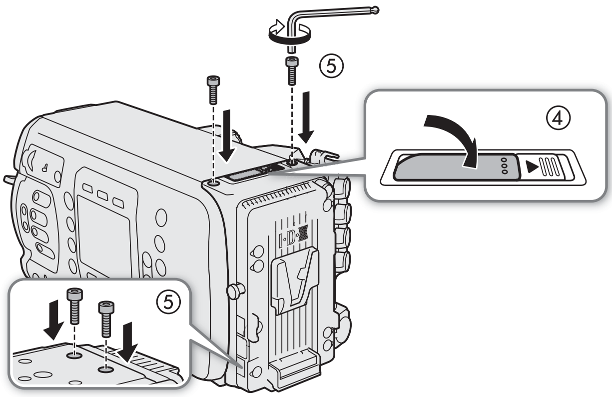


NOTES
- The built-in backup battery will be completely depleted if you do not use the camera for about 1 month. Replacing the lithium button battery in such case will reset all the camera's settings to default values. To avoid losing the settings, you can save them on an SD card in advance (📖 140).
- To recharge the built-in backup battery, turn off the camera and connect a sufficiently charged power source (battery or DC IN 12V terminal). The built-in backup battery will be fully charged in about 24 hours.

Installing an Extension Module

The following procedure is explained using the battery adapter for V-mount batteries supplied with the camera as example.





1 Slide the battery adapter release switch in the direction of the arrow.
- The locking lever will pop out. Once it does, pull the locking lever all the way up.

2 Attach the battery adapter to the camera and slide it down.
- Align the positioning protrusions on the battery adapter with the holes on the camera's body.

3 Gently press the battery adapter toward the camera.

4 Push down the locking lever until it clicks.

5 Using the supplied hex wrench, attach the four fixation screws to the top and bottom of the battery adapter to secure it in place.

Preparing the Main Power Supply

You can power the camera using a commercially available V-mount battery or the DC IN 12V terminal. Even when a battery is attached, if a power source is connected to the DC IN 12V terminal, the camera will not draw power from the battery.

Acceptable Power Sources

When selecting commercially available batteries and power adapters, make sure the external power source meets the following specifications and all the safety standards of the country/region where it is used. Closely follow the manufacturer's instructions regarding the use and maintenance of power sources.

Power source	Specifications
Battery	V-mount battery, 14.8 V DC (acceptable range: 12 V to 20 V DC)
Power adapter (DC IN 12V terminal)	4-pin XLR plug (female connector), 12 V DC (acceptable range: 11.5 V to 20 V DC), 10 A (acceptable maximum load current)

Using a Battery

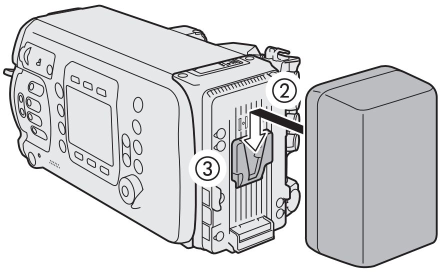
The battery adapter for V-mount batteries comes attached to the camera. If it was removed, attach the battery adapter in advance (📖 24).

Attaching a Battery

1 Make sure the camera is turned off.

2 Align the V-shaped wedge on the battery to the V-mount on the battery plate.

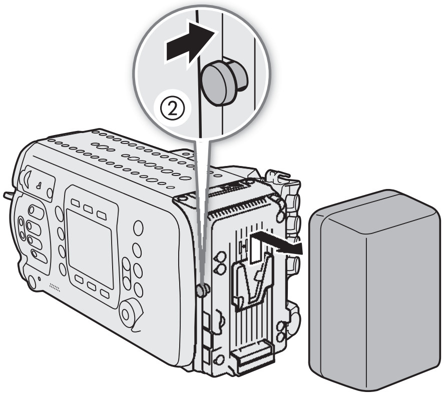
3 Gently press the battery down until it clicks in place.



Removing a Battery

1 Press the **POWER** button to turn off the camera.

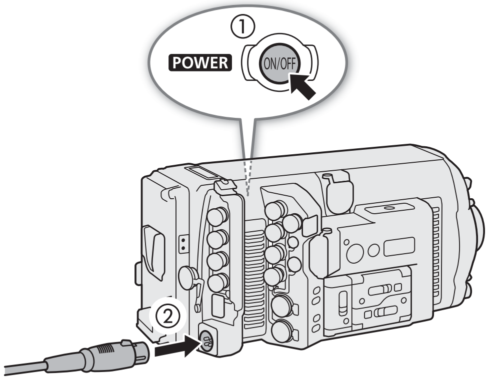
2 While holding the battery release latch pressed down, slide the battery up and remove it.



Using the DC IN 12V Terminal

1 Press the POWER button to turn off the camera.

2 Connect the 4-pin XLR connector of the external power supply to the camera's DC IN 12V terminal.



IMPORTANT

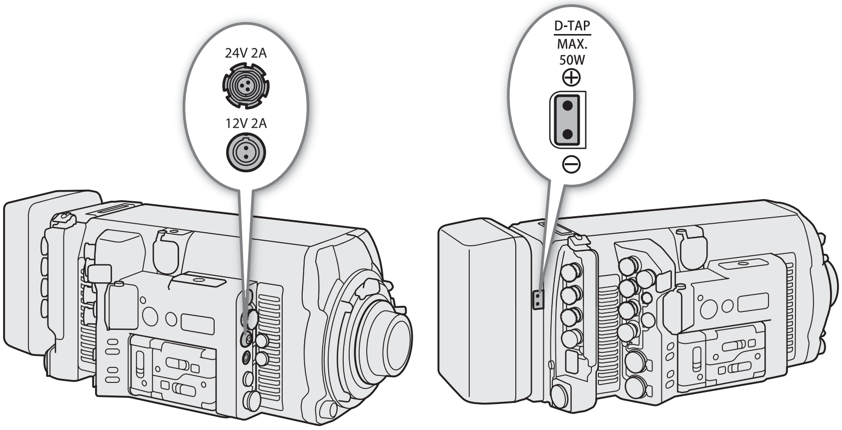
- Make sure to turn off the camera before connecting or disconnecting an external power source to/from the camera's DC IN 12V terminal.

Checking the Camera's Power Levels

You can check the voltage level of the power source used on the camera's HOME screen and on the shooting screen that appears on monitoring devices (□ 57, 59).
You can use the MENU ▸ [System Setup] ❯ [Low Power Warning] settings to set a critical power level independently for the DC IN 12V terminal and battery. When the power input to the camera reaches the predetermined level, the onscreen power indicator will change to red and a message will appear in the INFO ▸ [LIVE] screen. When using a battery compatible with BMS (battery management system), you can even set the warning level as a percentage of the remaining battery charge instead of voltage.

Power Outputs

The camera features three power outputs for accessories: the DC OUT 24V 2A terminal, the DC OUT 12V 2A terminal and the D-TAP terminal on the battery adapter.



Power output	Specifications*
DC OUT 24V 2A terminal	Fischer 3-pin connector, 24 V DC, 2.0 A (max.)
DC OUT 12V 2A terminal	LEMO 2-pin connector, 12 V DC, 2.0 A (max.)
D-TAP terminal	D-Tap connector, 50 W (max.)

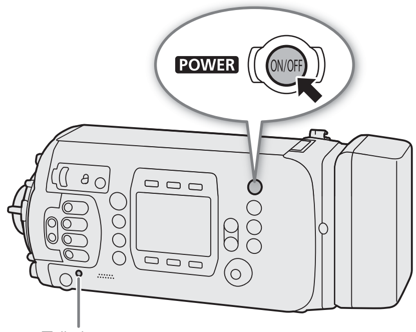
* Actual levels may vary depending on the power source supplying the camera.

IMPORTANT

- Be sure to use the camera's power outputs within the specifications given.
- When supplying power to external accessories, be careful of the polarity of the power connections. Connecting the power supply incorrectly can cause malfunctions.

Turning the Camera On and Off

After connecting an appropriate power source to the camera, press the POWER button to turn on the camera. While the camera is starting up, the tally lamp will illuminate in red. When the camera is ready to start recording, the tally lamp will change to green and the HOME screen will be displayed on the camera's control display.
To turn off the camera, press and hold the POWER button. After the countdown that appears on the control display ends, the camera will start the shutting down process and will turn off after a few seconds.

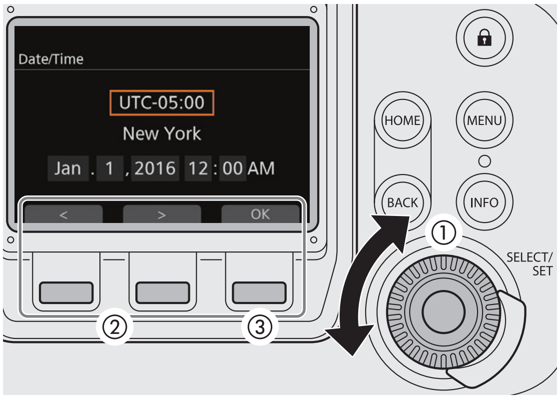


Tally lamp

Date, Time and Language Settings

Setting the Date and Time

You will need to set the date and time on the camera before you can start using it. When you turn on the camera for the first time or after the camera's settings were reset, the [Date/Time] screen will appear automatically on the control display with the time zone selected so you can set the camera's internal clock.



1 Turn the SELECT dial to select the desired time zone and then press SET to move to the next field.
   - The default time zone is [UTC-05:00] (New York) or [UTC+01:00] (Central Europe), depending on the country/region of purchase. Time zones are based on Coordinated Universal Time (UTC).

2 Change the rest of the fields in the same way.
   - You can also press the [<] and [>] screen buttons to move between the various fields.

3 After correctly setting the date and time, press the [OK] screen button to start the clock and close the screen.

NOTES

- With the MENU ▸ [System Setup] ❯ [Set Clock] settings, you can change the time zone, date and time also after the initial setup. You can also change the date format.
- If the lithium button battery and built-in backup battery are both completely depleted, all menu settings will be lost. In such case, replace the lithium button battery (📖 23) and perform the initial setup again.
- Using the optional GP-E1 GPS Receiver, you can have the camera adjust settings automatically according to the UTC date/time information received from the GPS signal (📖 120).

Changing the Language

The camera's default language is English. You can change it to German, Spanish, French, Italian, Polish, Portuguese, Russian, Simplified Chinese, Korean or Japanese. Please note that some settings and screens will be displayed in English, regardless of the language setting.

1 Press the MENU button.

2 Turn the SELECT dial to select [System Setup] and then press SET.

3 Select [Language 🗨] in a similar fashion and then press SET.

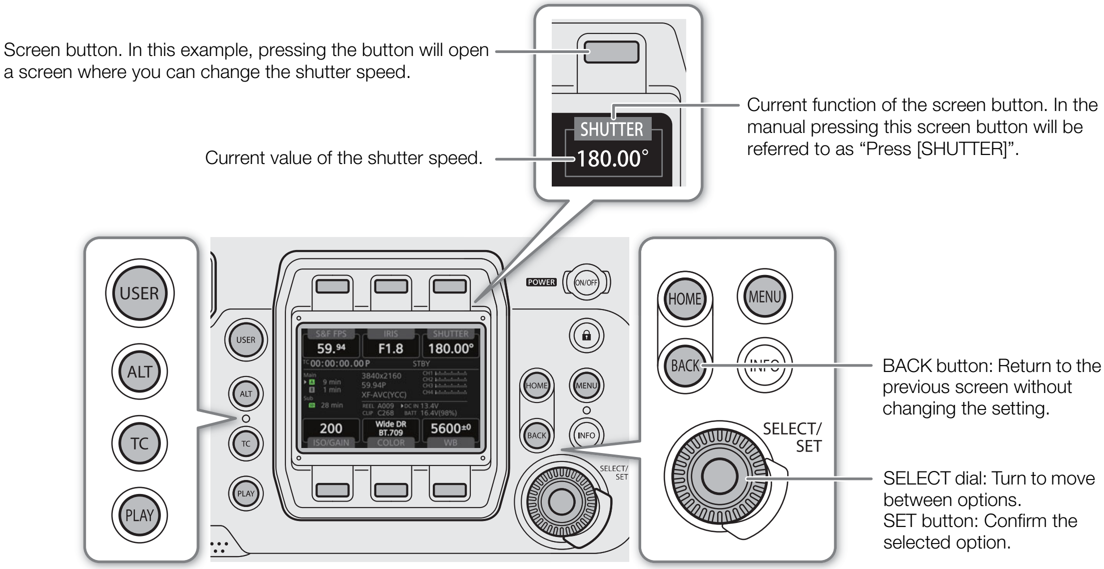
4 Turn the SELECT dial to select a language.

5 Press SET to change the language and then press the HOME button to close the menu.

Changing Camera Settings with the Screen Buttons

There are three basic ways to change the various camera settings: Using the screens that appear on the camera's control display and the screen buttons, using the camera menu displayed on the control display, and using the monitoring menu displayed on monitoring devices along with the camera's image. The menus will be explained in the following section (□ 32). This section will explain the use of the control display screens and screen buttons. When an optional OU-700 Remote Operation Unit is connected to the camera, using the OU-700 is identical to using the camera's control display and buttons.

Unlike the menus, the function of the screen buttons changes dynamically depending on the button pressed on the camera and the screen currently displayed on the control display. The current function of the screen buttons is displayed in the gray area immediately above/below the screen button. If applicable, the current setting is displayed within the white enclosure connected to it.



The HOME, USER, ALT, TC and PLAY buttons, each opens a different setup screen where you can change settings or perform actions (□ 183).

Options

HOME screen: This screen is displayed by default when you turn on the camera. In this screen you can change the frame rate, aperture and ND filter settings, shutter speed, ISO speed/gain, custom picture settings and white balance. You can also check the status of the camera, clip name, recording format, information about recording media and power supply.

USER screen: You can customize this screen to your needs by assigning the functions you prefer to the 6 screen buttons.

ALT screen: In this screen you can change settings related to autofocus (C700 only) and the focus assistance functions, audio, the camera's electronic level and network functions.

TC screen: In this screen you can change time code related settings.

PLAY screen: In this screen you can control the playback of your recordings (playback mode).

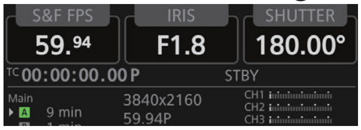
Following is a step-by-step example of how to change a setting using the screen buttons. In the manual, these will be abbreviated in most cases. For example, the instruction below stands for the procedure following it.

HOME ▸ [SHUTTER] ❯ Desired shutter value ❯ Press SET

1 Press the HOME button.

- The HOME screen will appear.

②



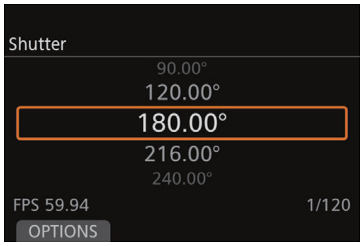
2 Press the [SHUTTER] screen button.

- The shutter speed selection screen will appear with the current shutter speed value marked with an orange selection frame.

3 Turn the SELECT dial to select the desired value and then press SET.

- The selected value will be applied and the previous screen will be displayed. If necessary, press the HOME button to return to the HOME screen.
- You can press the BACK button instead of the SET button to return to the previous screen without changing the current value.

③



Adjusting the Control Display

You can adjust the brightness of the control display on the camera or on an optional OU-700 Remote Operation Unit connected to the camera. This adjustment will not affect your recordings.

1 Open the control display's [Brightness] submenu.

MENU/EVF ▸ [Monitoring Setup] (⌨) ❯ [Control Display] ❯ [Camera] or [Remote OU-700] ❯ [Brightness]

2 Select the desired level ([5] is the brightest) and then press SET.

- Alternatively, you can adjust the control display’s brightness from the HOME screen by turning the SELECT dial while holding the BACK button pressed down.

ⓘ NOTES

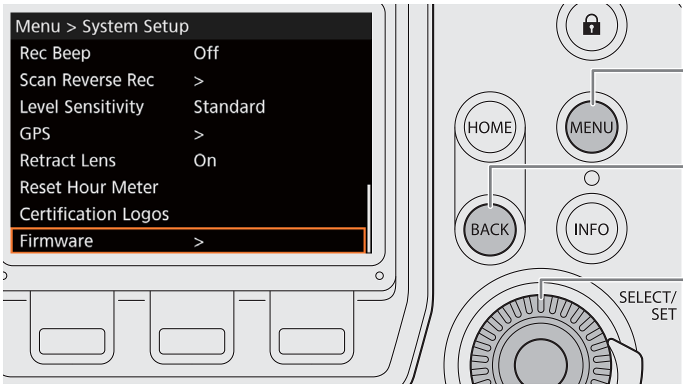
- If necessary, you can remove the control display’s protective cover inserting a fingernail or other thin object under the bottom center of the cover and pulling it. After cleaning the control display place back the protective cover on the control display and push all four corners to secure it in place.
- With the **MENU** ▸ [Monitoring Setup] ❯ [Control Display] ❯ [Camera] ❯ [Turn Off Display] setting, you can set the camera so the camera’s control display is turned off automatically whenever an optional OU-700 Remote Operation Unit is connected to the camera.
- If you set an assignable button to [Control Display Setup] (📖 127), you can press the button to open the monitoring menu’s [Control Display] submenu. If you set an assignable button to [Control Display] (📖 127), you can press the button to turn the control display on/off.
- You can use the **MENU** ▸ [System Setup] ❯ [LED] ❯ [Button Illumination] setting to turn on the buttons’ illumination and change their brightness. Alternatively, you can do so from the HOME screen by turning the SELECT dial while holding the HOME button pressed down.
- **About the control display and optional viewfinder:** The screens are produced using extremely high-precision manufacturing techniques, with more than 99.99% of the pixels operating to specification. Very rarely, pixels may misfire or may light up permanently as white dots. This has no effect on the recorded image and does not constitute a malfunction.

Using the Menus

You can change the camera's settings using the camera menu displayed on the control display or the monitoring menu displayed on the screen of connected monitoring devices. You can also register frequently used menu settings in 6 customized submenus (My Menu 1 to 3 that can be set up independently for the camera menu and the monitoring menu) (📖 35). For detailed tables of all the available menu options and settings, refer to *Setup Screens and Menu Options* (📖 183).

Selecting an Option from the Camera Menu

The camera menu appears on the control display and is limited, for the most part, to functions that cannot be set using the screen buttons. You can press the MENU button to open the camera menu regardless of the setup screen currently displayed.



MENU button:
Open the camera menu.

BACK button:
Return to the previous menu level without changing the setting.
From the main menu, it closes the camera menu.

SELECT dial:
Turn to move the orange selection frame between menu settings/options.

SET button:
Confirm the selected menu setting/option.

Following is a step-by-step explanation of how to change a setting using the camera menu. In the manual, such instructions will be abbreviated and will omit the closing of the menu in most cases. For example, the instruction below stands for the procedure following it.

MENU ▸ [System Setup] ❯ [Firmware]

1 Press the MENU button.

2 Turn the SELECT dial to select the desired submenu (in the example [System Setup]) and then press SET.
- The orange selection frame will appear on a menu item in the submenu.
- If a submenu contains many menu items, a scroll bar will appear on the right side of the submenu indicating that you must scroll up or down to see other menu items.
- Press the BACK button to return to the previous submenu.

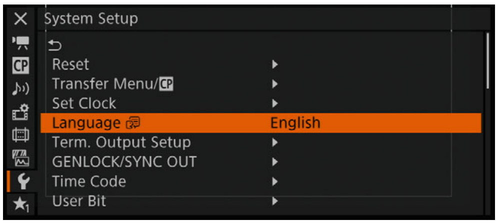
3 Turn the SELECT dial to select the desired menu item (in the example [Firmware]) and then press SET.
- A [>] mark to the right of a menu item indicates another submenu. Repeat this step until you get to the desired menu item.
- A list of setting options will appear with the orange selection frame around the current setting.
- Press the BACK button to return to the previous submenu without changing the setting.

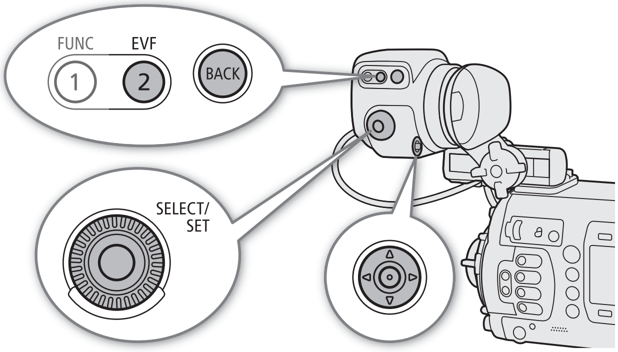
4 Turn the SELECT dial to select the desired setting option and then press SET.
- Depending on the menu item, additional selections may be necessary.

5 Press the HOME button to close the menu and return to the HOME screen.

Selecting an Option from the Monitoring Menu

The monitoring menu appears on the screen of external monitors connected to one of the camera's MON. terminals or to the HDMI OUT terminal and on the optional EVF-V70 OLED Electronic Viewfinder connected to the camera's VIDEO terminal. The monitoring menu contains almost all of the camera's settings and can be operated using the optional viewfinder or an optional RC-V100 Remote Controller connected to the camera (📖 123). For simplicity's sake, the instructions throughout this manual will assume the use of the optional viewfinder.





EVF button: Open the monitoring menu. On the RC-V100, press the MENU button instead.

BACK button: Return to the previous menu level without changing the setting. Pressing the button when one of the icon tabs is highlighted in orange will close the monitoring menu. On the RC-V100, press the CANCEL button instead.

SELECT dial: Turn to move the orange selection frame between menu settings/options.

Joystick: Push the joystick to move the orange selection frame between menu settings/options. On the RC-V100, press the Up/Down/Left/Right buttons instead. Press the joystick itself to confirm the selected menu setting/option.

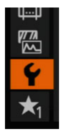
SET button: Confirm the selected menu setting/option. (In the manual, "Press SET" includes also pressing the joystick.)

Following is a step-by-step explanation of how to change a setting with the monitoring menu. In the manual, such instructions will be abbreviated and will omit the closing of the menu. For example, the instruction below stands for the procedure following it.

EVF ▸ [System Setup] (🔧) ❯ [Language 🗪] ❯ Desired language

1 On the optional viewfinder, press the EVF button. On an optional RC-V100 Remote Controller, press the MENU button.
- The monitoring menu appears on the screen.
- If you used the EVF button, the [EVF-V70] submenu will appear on the optional viewfinder's screen with the [Brightness] setting selected. To change other settings, press the BACK button twice to return to the monitoring menu's top level (with one of the icon tabs highlighted in orange).

2 Push the joystick up/down or turn the SELECT dial to select the desired submenu (in the example highlight the 🔧 tab corresponding to [System Setup]).



3 Push the joystick right or press SET.

- The orange selection frame will appear on a menu item in the submenu.
- Press the BACK button to return to the previous submenu.

4 Push the joystick up/down or turn the SELECT dial to select the desired menu item (in the example [Language 🗩]).

- If a submenu contains many menu items, a scroll bar will appear on the right side of the submenu indicating that you must scroll up or down to see other menu items.
- A ▶ mark to the right of a menu item indicates another submenu. Repeat steps 3 and 4.

5 Push the joystick right or press SET.

- The orange selection frame will appear on a setting option.
- Press the BACK button to return to the previous submenu.

6 Push the joystick up/down or turn the SELECT dial to select the desired setting option and then press SET.

- Depending on the menu item, additional selections may be necessary.

7 Press the EVF button twice* (optional viewfinder only) or the MENU button once (RC-V100 only) to close the menu.

* Only once when the [EVF-V70] submenu is being displayed.

NOTES

- Unavailable items may appear grayed out.
- On some screens, the SET or BACK icon may appear with some guidance text. Press SET or press the BACK button, respectively, to perform the action displayed.
- You can check some of the current settings on the camera's information screens (◻ 198).
- When the HDMI OUT terminal's resolution is set to 4096x2160 or 3840x2160, the monitoring menu will not be displayed on the monitor connected to the HDMI OUT terminal.

Using the Customized Submenu (My Menu)

You can register up to 15 frequently used menu settings under a My Menu submenu for easy access. You can save up to 6 separate sets of My Menu settings (3 each for the camera menu and monitoring menu) so you can customize different options for different shooting situations. Furthermore, if you set an assignable button to [My Menu] (🕮 127), you can press the button to access your registered monitoring menu settings even faster and more easily.

Selecting a My Menu Set

1 Open the My Menu [Select] screen.

MENU/EVF ▸ [My Menu]* ❯ [Select]

* In the monitoring menu, the icon and submenu name will reflect the My Menu set currently selected. By default this is [My Menu 1] (★1).

2 Select the desired My Menu set and then press SET.

Adding Menu Settings

1 Open the My Menu [Register] screen.

MENU/EVF ▸ [My Menu]* ❯ [Edit] ❯ [Register]

* In the monitoring menu, the icon and submenu name will reflect the My Menu set currently selected. By default this is [My Menu 1] (★1).

- The menu's title bar will change to blue to indicate you are selecting menu settings to add to the My Menu submenu.
- Press the BACK button to cancel the operation and return to the regular menu.

2 Navigate the menus to find the menu setting you want to add and then press SET.

3 Camera menu: Press [OK].
Monitoring menu: Select [OK] and then press SET.

- The menu setting you registered will now appear under the currently selected My Menu set.

4 When the confirmation screen appears, press [OK] (camera menu) or press SET (monitoring menu).

Rearranging Menu Settings

1 Open the My Menu [Move] screen.

MENU/EVF ▸ [My Menu]* ❯ [Edit] ❯ [Move]

* In the monitoring menu, the icon and submenu name will reflect the My Menu set currently selected. By default this is [My Menu 1] (★1).

2 Turn the SELECT dial to select the setting you want to move and then press SET.

- An orange ⬍ icon will appear next to the setting you selected to move.

3 Move the setting to the desired position and then press SET.

4 Camera menu only: Press [OK].

Removing Menu Settings

1 Open the My Menu [Delete] screen.

MENU/EVF ▸ [My Menu]* ❯ [Edit] ❯ [Delete]

* In the monitoring menu, the icon and submenu name will reflect the My Menu set currently selected. By default this is [My Menu 1] (★1).

2 Select the setting you want to remove and then press SET.

3 Camera menu: Press both [DELETE] buttons simultaneously.
Monitoring menu: Select [OK] and then press SET.

4 When the confirmation screen appears, press [OK] (camera menu) or press SET (monitoring menu).

Resetting the My Menu Submenu

1 Reset all the menu settings registered to the currently selected My Menu set.

MENU/EVF ▸ [My Menu]* ❯ [Edit] ❯ [Reset All]

* In the monitoring menu, the icon and submenu name will reflect the My Menu set currently selected. By default this is [My Menu 1] (★1).

2 Camera menu: Press both [RESET] buttons simultaneously.
Monitoring menu: Select [OK] and then press SET.

3 When the confirmation screen appears, press [OK] (camera menu) or press SET (monitoring menu).

Renaming the Selected My Menu Set

You can give each of the My Menu sets a more descriptive name to make them easier to identify.

1 Open the My Menu [Rename] screen.

MENU/EVF ▸ [My Menu]* ❯ [Edit] ❯ [Rename]

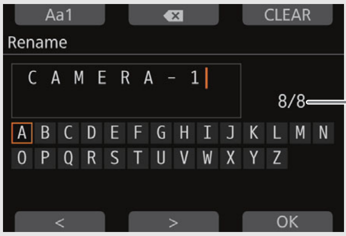
* In the monitoring menu, the icon and submenu name will reflect the My Menu set currently selected. By default this is [My Menu 1] (★1).

2 Monitoring menu only: Select [Input] and then press SET.

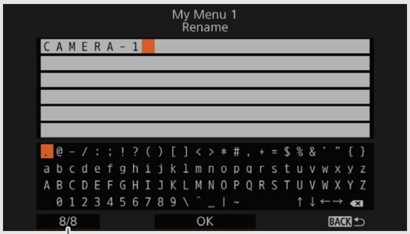
3 Enter the desired name (up to 8 characters) using the keyboard screen (□ 37).

Using the keyboard screen

Camera menu keyboard



Monitoring menu keyboard

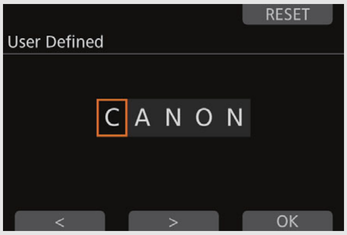


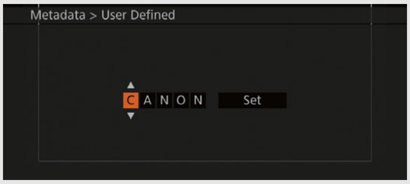
Current text length/Character limit

1 Turn the SELECT dial (camera menu) or push the joystick in any direction (monitoring menu) to select a character and press SET to add it to the text.
   - Camera menu only: Press [Aa1] to change the keyboard between capital letters, small letters and numbers/special characters.
2 Repeat to keep adding characters to the text as necessary.
   - You can press [<]/[>] (camera menu) or select one of the ↑↓←→ arrows and press SET (monitoring menu) to move the cursor.
   - Press [⌫] (camera menu) or select [⌫] and press SET (monitoring menu) to delete the character to the left of the cursor (backspace).
   - Camera menu only: Press [CLEAR] to delete all the text and start over.
3 Press [OK] (camera menu) or select [OK] and press SET (monitoring menu) to confirm the text/value entered.
   - Press the BACK button to return to the previous screen without changing the current text.

Short text/numbers version

For short text fields and numeric values, a shorter version of the keyboard may appear.





1 Turn the SELECT dial (camera menu) or push the joystick up/down (monitoring menu) to select the first character or digit and press SET to move to the next.
2 Change the rest of the characters/digits in the same way.
   - You can also press [<]/[>] (camera menu) or push the joystick left/right (monitoring menu) to move between characters/digits.
   - Camera menu only: Press [RESET] to reset the text or value to its initial setting.
3 Press [OK] (camera menu) or select [Set] and press SET (monitoring menu) to confirm the text/value entered.
   - Press the BACK button to return to the previous screen without changing the current text/value.

Preparing the Camera

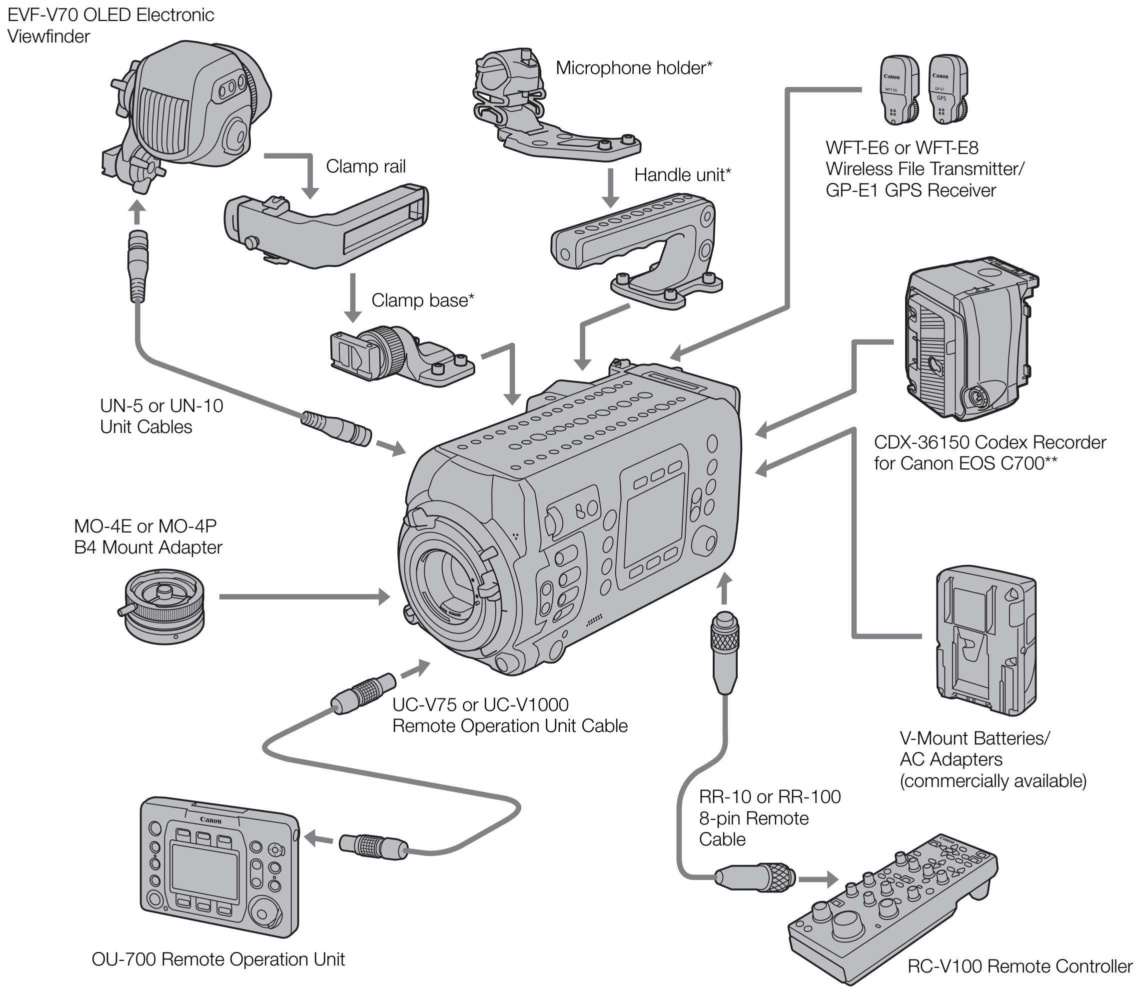
This section presents various shooting configurations of the camera and explains how to attach a lens and different accessories to the camera such as the supplied handle unit, the optional EVF-V70 OLED Electronic Viewfinder, etc.

Shooting Configurations

You can use the camera with a number of modular units, supplied accessories and optional accessories to set up the configuration that best matches your shooting needs. Following are some examples of shooting configurations.

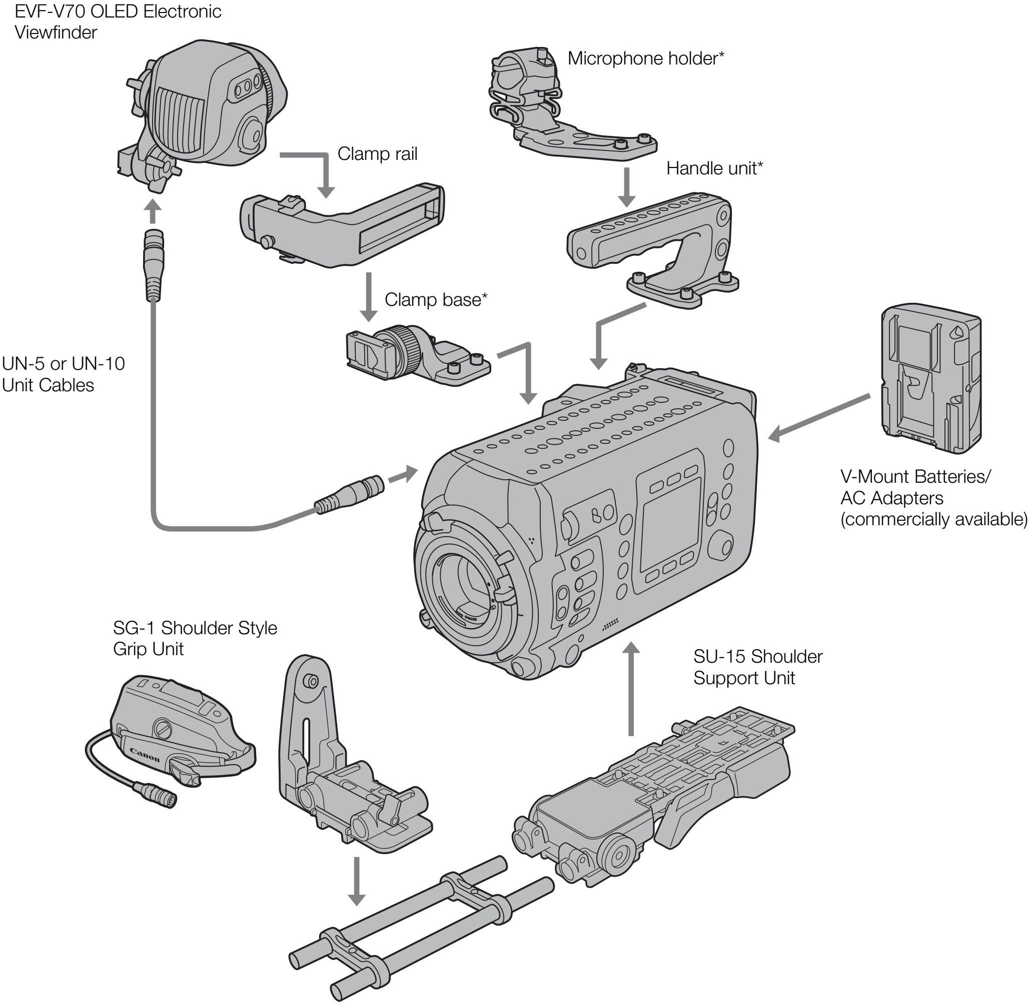
Configuration for Team Operation

You can attach the optional OU-700 Remote Operation Unit to the right side of the camera to allow one person to use the camera menu while another uses the optional EVF-V70 OLED Electronic Viewfinder.



* Supplied accessory.
** Requires the removal of the supplied battery adapter for V-mount batteries.

Configuration for One-Person Operation



* Supplied accessory.

IMPORTANT

- Be careful not to drop the camera or modular units when attaching, removing or adjusting the various accessories. Use a table or other stable surface to change the camera's configuration.

NOTES

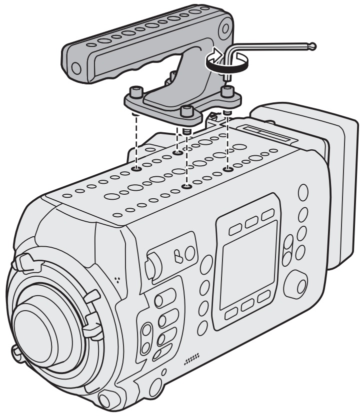
- For a more convenient one-person operation, you can use the optional SG-1 Shoulder Style Grip Unit and connect the 12-pin interface cable to the camera's LENS terminal to be able to start/stop recording, operate the zoom and aperture, access the monitoring menu, and more, directly from the grip unit.
- For details about docking the CDX-36150 Recorder with the camera and using it to record, refer to *Codex Recorder – Guide for the EOS C700 models* (separate PDF file).

Attaching the Handle Unit

You can adjust the position of the handle considering the total weight and center of gravity of the camera with the lens and all the accessories used attached.

Attach the handle unit to the desired position on top of the camera.

- Use the supplied hex wrench to secure it firmly with the 4 hex socket head bolts.

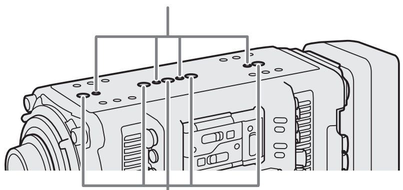


NOTES

- The handle unit has screw holes for 1/4"-20 mounting screws (10 mm (0.39 in.) deep) and for 3/8"-16 mounting screws (12 mm (0.47 in.) deep), giving you the option to attach the supplied microphone holder or other commercially available accessories.

Using a Tripod

Along its central axis, the camera's bottom plate has 4 screw holes for 1/4"-20 mounting screws (10 mm (0.39 in.) deep) and 5 screw holes for 3/8"-16 mounting screws (12 mm (0.47 in.) deep) that can be used to mount the camera on a tripod, dolly or other rigs. Decide on the best position to use considering the total weight and center of gravity of the camera with the lens and all the accessories used attached.



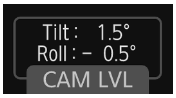
IMPORTANT

- Do not use tripods with mounting screws exceeding the depth of the screw holes on the camera as this may damage the camera.

Checking that the Camera is Horizontal

You can use the camera's electronic level to make sure the shooting plane is truly horizontal. On the control display you can check the camera's tilt (the degree of rotation of the optical axis up and down) and roll (the degree of rotation sideways along the optical axis) as numerical values. On the monitoring screen you can display an indicator that shows graphically the camera's sideways roll (only).

1 Press the ALT button.
   - The camera's inclination (tilt and roll) will be displayed on the control display.



2 If necessary, set the current camera position as the electronic horizon.
   [CAM LVL] ❯ Press both [SET] buttons simultaneously

NOTES

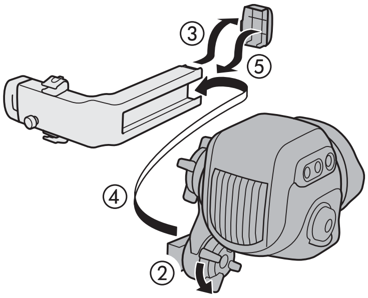
- To display the visual level on the monitoring screen set MENU ▸ [Monitoring Setup] ❯ [Custom Display 2] ❯ [Level] to [On]. You can also use the MENU ▸ [System Setup] ❯ [Level Sensitivity] setting to adjust the sensitivity of the camera's electronic level.
- You can reset only the electronic level to factory settings (without affecting other camera settings) with the MENU ▸ [System Setup] ❯ [Reset] ❯ [Level] setting.

Using the Optional EVF-V70 OLED Electronic Viewfinder

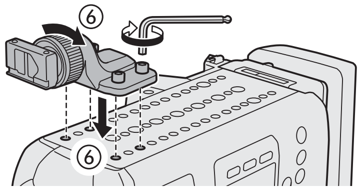
After attaching the supplied clamp base to the camera, you can attach the optional EVF-V70 OLED Electronic Viewfinder to the clamp base. An optional UN-5 or UN-10 Unit Cable is required to connect the optional viewfinder to the camera. You can adjust the viewfinder's swing arm and clamp rail sliders to set the viewfinder to a comfortable viewing angle. To protect the viewfinder's OLED panel, the viewfinder will be dimmed automatically when it is not in use.
Throughout the manual, the EVF-V70 will be referred to simply as "the optional viewfinder".

Attaching the Optional Viewfinder

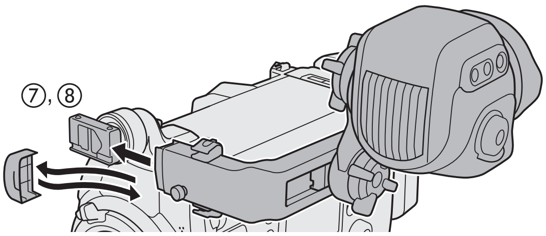
1 Press the POWER button to turn off the camera.
2 On the optional viewfinder, loosen the swing arm's locking screw (clamp rail side).
3 Remove the clamp rail's end cap.
4 Insert the swing arm's slider into the clamp rail with the "TOP" label facing up.
5 Attach the end cap to the clamp rail.



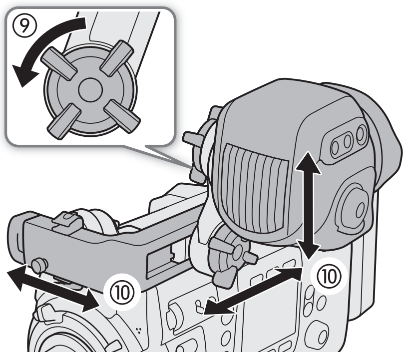
6 Attach the supplied clamp base to the desired position on top of the camera and loosen the clamp rail locking screw.
- Use the supplied hex wrench to secure it firmly with the 4 hex socket head bolts.



7 Remove the end cap from the other arm of the clamp rail and insert the slider at the front of the clamp base into the clamp rail.
8 Attach the end cap to the clamp rail.



9 Loosen the other swing arm's locking screw (viewfinder side).
10 Adjust the optional viewfinder to the desired position (up/down, front/back) and fasten all the screws.
- Be sure to firmly hold the viewfinder with one hand as you adjust its position.
- Fasten the two locking screws of the swing arm and the clamp rail locking screw on the clamp base.

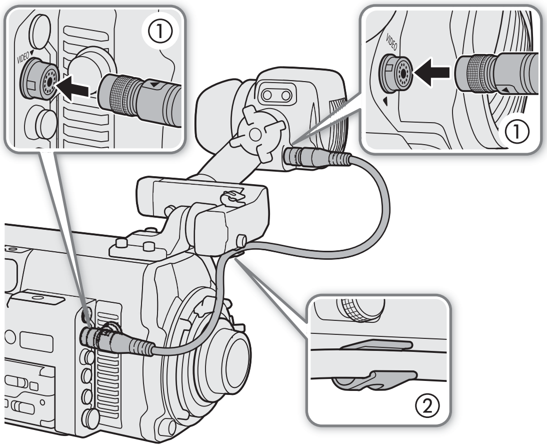


Connecting and Adjusting the Optional Viewfinder

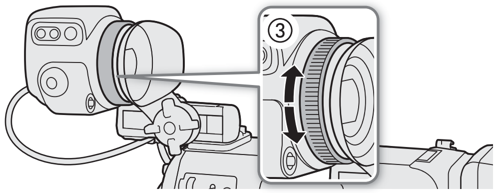
You can adjust the brightness, contrast, color, sharpness, and luminance level of the optional viewfinder. These adjustments will not affect your recordings.

1 **Connect the camera's VIDEO terminal to the optional viewfinder's VIDEO terminal using an optional UN-5 or UN-10 Unit Cable.**
   - Align the ▲ marks on the cable's plugs and the terminals.

2 **Put the unit cable through one of the cable clamps on the clamp rail.**
   - The clamp rail has 4 screw holes for the cable clamps so you can adjust their position as needed.



3 **Turn on the camera and turn the dioptric adjustment ring until the viewfinder's image is sharp.**



4 **Press the EVF button on the optional viewfinder.**
   - The monitoring menu will open with the [EVF-V70] submenu selected.
   - Alternatively, you can press an assignable button set to [EVF-V70 Setup] (🕮 127).

5 **Select [Brightness], [Contrast], [Color], [Sharpness] or [Luminance] and then press SET.**

6 **Select the desired level and then press SET.**
   - Repeat steps 5 and 6 to adjust other settings as necessary.

ⓘ NOTES

- The optional viewfinder displays in color by default. You can set **EVF** ▸ [Monitoring Setup] (▤) ❯ [B&W Image] ❯ [VIDEO Output] to [On] to set the viewfinder to black and white.
- By default, the optional viewfinder's screen will be dimmed automatically when it is not being used. You can set **EVF** ▸ [Eye Sensor] to [Off] to keep the optional viewfinder's screen always bright.
- When using one of the Canon Log gamma curves, you can apply a LUT to the image displayed on the optional viewfinder (🕮 154).

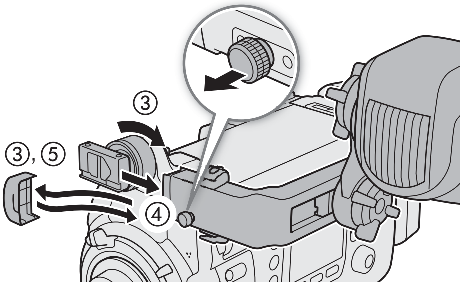
Removing the Optional Viewfinder

1 Press the **POWER** button to turn off the camera.

2 Disconnect the unit cable from the camera and viewfinder.

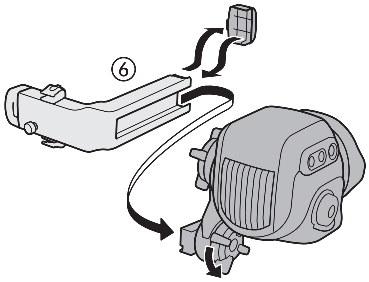
3 Remove the end cap from the clamp rail's arm attached to the clamp base and loosen the clamp rail locking screw.

4 While pulling out the locking pin at the other side of the clamp rail, remove the clamp rail from the clamp base.
- The slider will stop at the end of the rail. Pull out the locking pin at the other side of the clamp rail to be able to take the slider completely out of the rail.



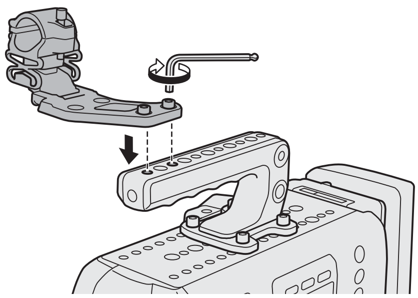
5 Attach the end cap to the clamp rail.

6 If you wish to remove the clamp rail from the optional viewfinder, repeat steps 3 to 5 with the clamp rail's arm attached to the viewfinder.
- In that case, loosen the swing arm's locking screw (clamp rail side).



Attaching the Microphone Holder

Attach the supplied microphone holder to the desired position on the handle unit or the top plate of the camera.
- Use the supplied hex wrench to secure it firmly with the 2 hex socket head bolts.



Preparing the Lens

As much as possible, attach and remove the lens quickly and in a clean environment free of dust. Refer also to the instruction manual of the lens used.

IMPORTANT

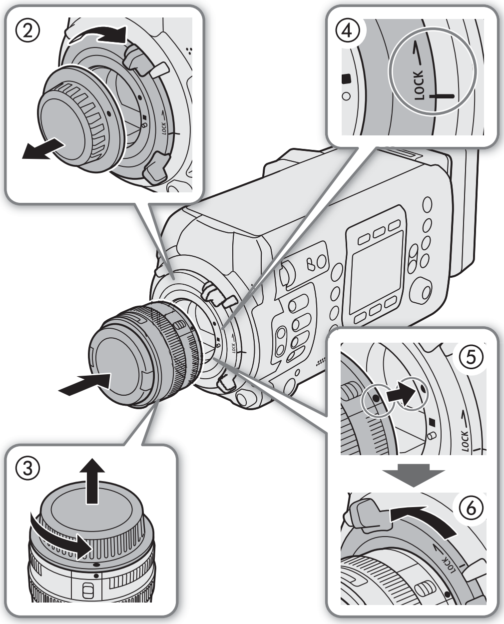
- Make sure to turn off the camera before attaching/removing a lens and before connecting/disconnecting a lens's 12-pin interface cable to/from the camera's LENS terminal. Failing to do so can cause a malfunction of the camera or lens.
- When attaching/removing a lens, avoid direct sunlight or strong light sources. Also, be careful not to drop the camera or lens.

NOTES

- **After removing a lens/When a lens is not attached to the camera:**
  - Do not touch the lens's surfaces, the lens mount or any components inside the lens mount area.
  - Place the body cap back on the lens mount and the dust caps back on the lens. Clean any dust or dirt from the body cap and dust caps before using them.

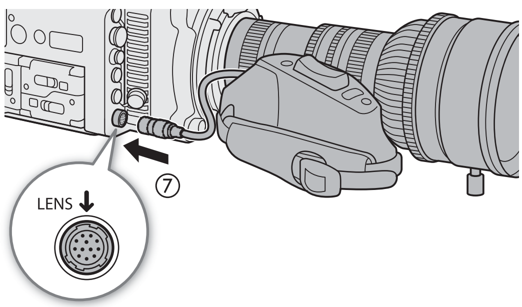
C700 Attaching an EF Lens

1 Press the POWER button to turn off the camera.
2 Turn the mount handle clockwise until it stops.
3 Remove the body cap from the camera and any dust caps from the lens.
4 Check that the mount handle is at the correct position for attaching a lens.
5 Align the lens and mount making sure that the index marks are aligned.
   - EF lenses: Align the red dot on the lens with the red EF lens mount index mark on the camera.
   - EF-S lenses: Align the white square on the lens with the white EF-S lens mount index mark on the camera.
6 After the lens is attached to the camera, without turning the lens, turn the mount handle counter-clockwise until it is tightened firmly.



Only when using a lens with a 12-pin camera interface cable:

7 Connect the lens's 12-pin cable to the camera's LENS terminal.
   - This allows the camera to power the lens's drive unit.
8 Press the POWER button to turn on the camera.
9 If necessary, change the lens's settings to allow control from the camera.
   - Only when using a CN7x17 KAS S/E1 or CN20x50 IAS H/E1 lens: In the lens's Info screen, set [I/Fprior] to [Mount].
   - For details, refer to the instruction manual of the lens used.

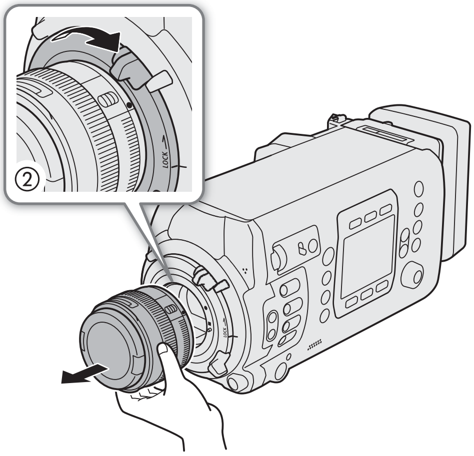


C700 Removing an EF Lens

1 Press the POWER button to turn off the camera.
- If the lens is connected to the camera's LENS terminal, disconnect the 12-pin cable after turning off the camera.

2 While holding the bottom of the lens, turn the mount handle clockwise until it stops.
- Make sure not to drop the lens when removing it.

3 Place the body cap back on the lens mount and the dust caps back on the lens.



NOTES

- Turning on the image stabilization function of an EF lens may reduce the effective usage time of the battery. When image stabilization is not necessary, for example if the camera is fixed to a tripod, it is recommended to turn it off.
- Depending on the lens used, you may experience one or more of the following limitations.
  - The lens model name may be shortened when displayed on the screen.
  - You may not be able to focus manually when the focus mode switch is set to AF.
  - You may not be able to use the focus preset function on super telephoto lenses.
  - You may not be able to use the power zoom function on lenses with that function.
- This camera's sensor is larger than the sensor size for which EF-S lenses are designed (APS-C). When using EF-S lenses with this camera, you may notice peripheral illumination fall-off or vignetting.
- When using a compatible lens, you can use the MENU ▸ [System Setup] ❯ [Retract Lens] setting to retract the lens automatically when the camera's power is turned off.

C700 Updating the Firmware of an EF Lens

You can update the lens firmware of the EF lens attached to the camera. For details about firmware updates for EF lenses, visit your local Canon Web site.

1 Download the lens firmware update file from the Canon Web site and save it on an SD card. Insert the SD card containing the lens firmware update into the SD card slot.

2 Attach the lens you wish to update to the camera and open the lens firmware submenu.

MENU/EVF ▸ [System Setup] (🔧) ❯ [Firmware] ❯ [Lens]

- The current lens firmware version will be displayed.
- If the [Lens] option is grayed out, the attached lens may not support firmware updates or the SD card used may not contain a valid lens firmware file. Check the lens and SD card and repeat the procedure from the beginning.

3 Press [OK] (camera menu) or select [OK] and press SET (monitoring menu).

4 Select the lens firmware file (file extension .LFU) and then press SET.

5 Press [OK] (camera menu) or select [OK] and press SET (monitoring menu).
- The lens firmware will be updated. Once in progress, the lens firmware update cannot be canceled.

6 When the confirmation message appears, press [OK] (camera menu) or press SET (monitoring menu).

IMPORTANT

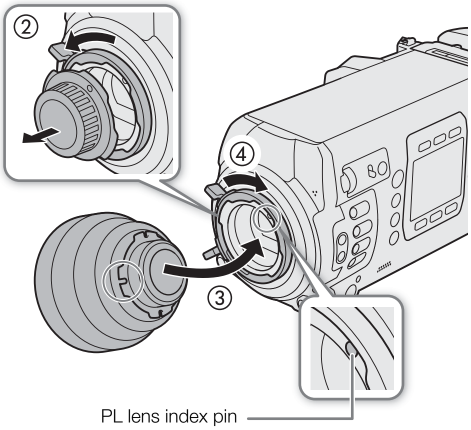
- Be sure to observe the following precautions while the lens firmware is being updated. Failing to do so can cause malfunctions.
  - Do not remove the power source or turn off the camera.
  - Do not remove the lens.
  - Do not operate any buttons or controls on the camera.
  - Do not open the SD card slot cover and do not remove the SD card.

NOTES

- We recommend that you power the camera from a power outlet using an AC adapter or use a sufficiently charged battery.
- When using an optional EF extender, remove the extender before performing the procedure.

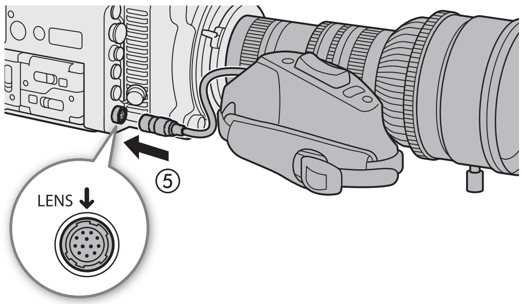
C700 PL C700 GS PL Attaching a PL Lens

1 Press the POWER button to turn off the camera.
2 Hold a bayonet ring handle and turn the bayonet ring counter-clockwise to remove the body cap and remove any dust caps from the lens.
3 Attach the lens to the camera aligning a groove on the lens with the PL lens index pin on the mount.
4 Turn the bayonet ring clockwise to fix the lens in place.



Only when using a lens with a 12-pin camera interface cable:

5 Connect the lens's 12-pin cable to the camera's LENS terminal.
   - This allows the camera to power the lens's drive unit.
6 Press the POWER button to turn on the camera.
7 If necessary, change the lens's settings to allow control from the camera.
   - For details, refer to the instruction manual of the lens used.



NOTES

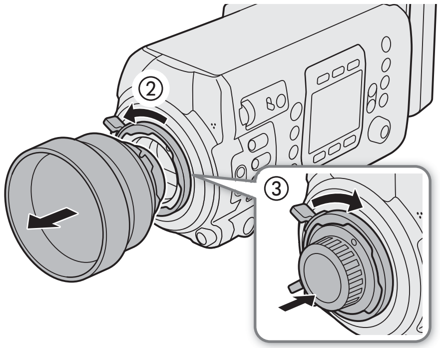
- **When a B4 lens is attached to the camera (using the optional MO-4E or MO-4P B4 Mount Adapter)**
  - Set MENU ▸ [Camera Setup] ❯ [Mount Adapter] to [MO-4E] (C700) or [MO-4P] (C700 PL C700 GS PL) to optimize settings for the use of the adapter. The video configuration will change automatically to 1920x1080, YCbCr 10 bit, 50 Mbps Long GOP at 59.94i or 50.00i (depending on the system frequency).
  - If you connect the lens's 12-pin camera interface cable to the camera's LENS terminal, you will be able to zoom and use the push auto iris function from the camera.
  - When using a B4 lens compatible with the L.C.A.C. (automatic lens chromatic aberration correction) function, if the 12-pin interface cable is connected to the camera, the camera will correct automatically the lens's chromatic aberration. In such case, L.C.A.C. will appear at the left of the monitoring screen.

C700 PL C700 GS PL Removing a PL Lens

1 Press the POWER button to turn off the camera.
- If the lens is connected to the camera's LENS terminal, disconnect the 12-pin cable after turning off the camera.

2 Turn the bayonet ring handles counter-clockwise.

3 Remove the lens and place the body cap back on the lens mount and the dust caps back on the lens.



In-Camera Lens Correction

Depending on the characteristics of the lens used, the corners of an image frame may be darker than the center due to light fall-off (peripheral illumination drop), or color shift/color fringing may be visible along high-contrast edges in the image (chromatic aberration). If the camera has correction data available for the lens used, it can apply this correction data to compensate as necessary.
Peripheral illumination correction is available for EF lenses. Chromatic aberration correction is available for EF lenses and broadcast lenses, including automatic correction for broadcast lenses compatible with L.C.A.C (□ 46).

1 Attach the lens you want to use.

2 Open the desired correction screen.

MENU/EVF ▸ [Camera Setup] (🎥) ❯ [Periph. Illum. Corr.] or [Chrom. Aberr. Corr.]
- If correction data is not available, or if the broadcast lens attached is not compatible with L.C.A.C., the corresponding menu option will appear grayed out. In the case of an EF lens, visit your local Canon Web site and check if there is correction data available for the lens you are using. If so, download the necessary update package and upgrade the camera's firmware following the instructions supplied therein.

3 Select [On] and then press SET.
- As long as [Periph. Illum. Corr.] or [Chrom. Aberr. Corr.] is set to [On], the camera will automatically apply the appropriate correction data.

NOTES

- **About in-camera lens correction data:** The camera contains a register of correction data for compatible EF lenses that were available at the time the camera went on sale. Correction data for future lenses will be made available as part of the regular updates released for the camera's firmware. For more details, visit your local Canon Web site.
- No peripheral illumination/chromatic aberration correction will be applied in the following cases:
  - When the appropriate correction data is not available for the EF lens attached.
  - When using non-Canon lenses. Even if the corresponding menu setting is available (not grayed out), setting it to [Off] is recommended.
- When peripheral illumination correction is activated:
  - Depending on the recording conditions, noise may appear in the periphery of the image as a result of the correction.
  - The level of correction will be lower for lenses that cannot provide distance information.
  - The level of correction will be lower the higher the ISO speed/gain setting used.
  - Due to the difference in sensor size, when using EF-S lenses, peripheral illumination fall-off may be more pronounced.

Preparing Recording Media

The camera records main recording clips (XF-AVC or ProRes) and sub recording clips (XF-AVC Intra) on CFast cards, and sub recording proxy clips (XF-AVC Proxy) and photos on SD cards*. The camera features two CFast card slots. When you insert two CFast cards in the camera, the camera can record 4K clips simultaneously on both cards, or it can switch automatically to recording on the other CFast card when a CFast card becomes full. Initialize recording media (□ 51) when you use them with this camera for the first time.

* The SD card is used also to save custom picture files, menu settings files and user memo files created with the Canon XF Utility software (□ 158) for later use on the camera.

Compatible Recording Media

The following types of memory card can be used with this camera. For the latest information about recording media tested for use with this camera, visit your local Canon Web site.

CFast cards

CFast 2.0-compliant cards.

SD cards*

SD card type:	SD cards	SDHC cards	SDXC cards
SD Speed Class**:	CLASS 6	CLASS 10	

* As of October 2016, the clip recording function has been tested using SD cards made by Panasonic, Toshiba and SanDisk.
** SD Speed Class is a standard that indicates the minimum guaranteed data transfer rate of SD cards.

IMPORTANT

- CFast cards can become hot due to the high operating temperature inside the camera. Removing a CFast card immediately after using it for recording may cause burns or cause you to drop the CFast card, resulting in damage to the card.
- After repeatedly recording, deleting and editing clips (if the memory is fragmented), you may notice slower writing speeds to the recording media and recording may even stop. In such case, save your recordings and initialize the recording media with the camera (using the [Complete] initialization option for SD cards). Be sure to initialize recording media especially before shooting important scenes.
- **About CFast and SDXC cards:** You can use CFast and SDXC cards with this camera but these types of cards are initialized by the camera using the exFAT file system.
  - When using exFAT-formatted cards with other devices (digital recorders, card readers, etc.), make sure that the external device is compatible with exFAT. For more information on compatibility, contact the computer, operating system or memory card manufacturer.
  - If you use exFAT-formatted cards with a computer OS that is not exFAT-compatible, you may be prompted to format the card. In such case, **cancel the operation to prevent data loss**.

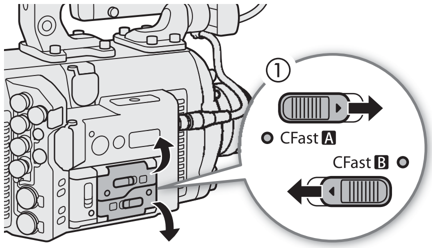
NOTES

- Proper operation cannot be guaranteed for all recording media.

Inserting a CFast Card

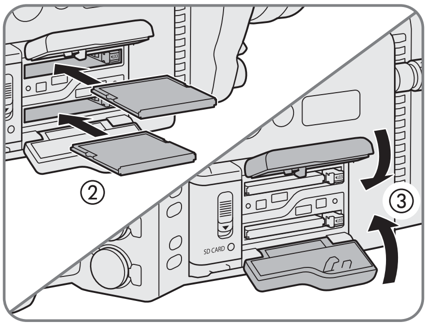
You can insert a CFast card into CFast card slot A or slot B. If you have two CFast cards, you can use both slots.

1 Slide the CFast card slot cover switch in the direction of the arrow.
   - The CFast card slot cover will open upward (slot A) or downward (slot B).



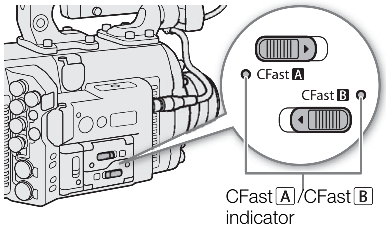
2 Insert the CFast card straight, with the label facing up, all the way into the slot.

3 Close the CFast card slot cover.
   - Do not force the cover closed if the CFast card is not correctly inserted.



CFast card access indicators

CFast A/CFast B indicator	CFast card status
Red	Accessing the CFast card.
Green	Recording/playback is possible and the CFast card slot is selected for recording/playback.
Off	A CFast card is not inserted or the CFast card slot is not currently selected.

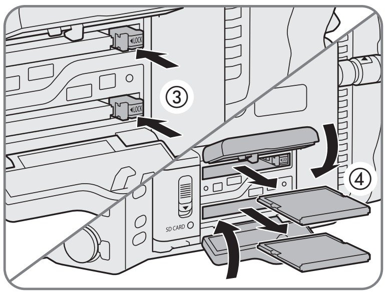


If you set MENU ▸ [System Setup] ❯ [LED] ❯ [Media Access] to [Off], the card access indicators will not illuminate.

Removing a CFast card

1 To remove the CFast card currently selected, wait until the CFast card access indicator is illuminated in green.
   - A CFast card not currently selected (CFast card access indicator is off) can be removed at any time.

2 Slide the CFast card slot cover switch in the direction of the arrow.
   - The CFast card slot cover will open upward (slot A) or downward (slot B).
   - The card access indicator will illuminate in red momentarily. Wait until the indicator is off.



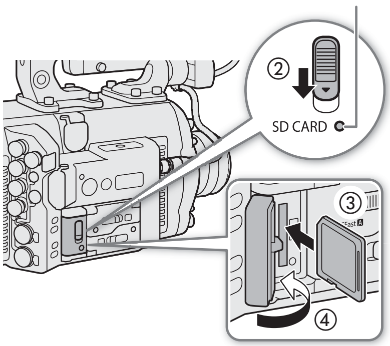
3 Push the CFast card release button.

4 Pull out the CFast card and close the CFast card slot cover.

IMPORTANT

- Observe the following precautions while a CFast card access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not remove the power source or turn off the camera.
  - Do not open the cover of the CFast card slot being accessed.

Inserting and Removing an SD Card



1 Wait until the SD card access indicator is off or is illuminated in green.

2 Slide the SD card slot cover switch in the direction of the arrow.
- The SD card slot cover will open to the left.

3 Insert the SD card straight, with the label toward the back of the camera, all the way into the SD card slot until it clicks.
- To remove the SD card, wait until the access indicator is off and then push the SD card once to release it. When the SD card springs out, pull it all the way out.

4 Close the SD card slot cover.
- Do not force the cover closed if the SD card is not correctly inserted.

SD card access indicator

SD card access indicator	SD card status
Red	Accessing the SD card.
Green	Simultaneous sub recording of XF-AVC Proxy clips is activated and the SD card is ready for recording, or playback of XF-AVC Proxy clips and photos is possible.
Off	An SD card is not inserted, the SD card is not being accessed, or the SD card is write-protected with the LOCK switch.

If you set MENU ▸ [System Setup] ➤ [LED] ➤ [Media Access] to [Off], the card access indicators will not illuminate.

IMPORTANT

- Observe the following precautions while the SD card access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not remove the power source or turn off the camera.
  - Do not remove the SD card.
- SD cards have front and back sides that are not interchangeable. Inserting an SD card facing the wrong direction can cause a malfunction of the camera. Be sure to insert the SD card as described in step 3.

NOTES

- SD cards have a physical switch to prevent writing on the card so as to avoid the accidental erasure of the card's content. To write-protect the SD card, set the switch to the LOCK position.

Initializing Recording Media

The first time you use a recording media with this camera, initialize it first. You can also initialize a recording media to permanently delete all the data it contains.

When initializing an SD card, you can select quick initialization, which clears the file allocation table but does not physically erase the stored data, or complete initialization, which deletes all data completely.

1 Open the [Initialize Media] submenu.

   MENU/EVF ▸ [Rec/Media Setup] (🎥) ❯ [Initialize Media]

   • Alternatively, you can press an assignable button set to [Initialize Media] (📖 127).

2 Select [CFast A], [CFast B] or [SD Card] and then press SET.

To initialize a CFast card

3 Camera menu: Press both [FORMAT] buttons simultaneously.
   Monitoring menu: Select [OK] and then press SET.

   • The CFast card is initialized and all the data it contains is erased.

4 When the confirmation message appears, press [OK] (camera menu) or press SET (monitoring menu).

To initialize an SD card

3 Select [Complete] (complete initialization) or [Quick] (quick initialization) and then press SET.

4 Camera menu: Press both [FORMAT] buttons simultaneously.
   Monitoring menu: Select [OK] and then press SET.

   • The SD card is initialized and all the data it contains is erased.
   • If you are using the [Complete] initialization option, press [CANCEL] (camera menu) or press SET (monitoring menu) to cancel the operation while it is in progress. You can use the SD card but all data will be erased.

5 When the confirmation message appears, press [OK] (camera menu) or press SET (monitoring menu).

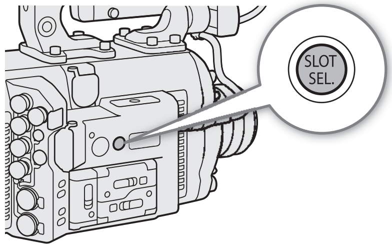
IMPORTANT

• Initializing a recording media will permanently erase all data, including clips with an OK mark, photos and protected custom picture files. Lost data cannot be recovered. Make sure you save important recordings in advance.
• Be sure to observe the following precautions while the initialization is in progress. Failing to do so may result in permanent data loss.
  - Do not remove the power source or turn off the camera.
  - Do not open the card slot cover of the recording media being initialized and do not remove the recording media.
• Depending on the SD card, the complete initialization may take up to a few minutes.

NOTES

• While recording on a CFast card, you can initialize another CFast card in the other CFast card slot.

Switching Between the CFast Card Slots



The camera features two CFast card slots, CFast A (CFast card slot A) and CFast B (CFast card slot B). If both slots contain a CFast card, you can switch between them as necessary.

Press the SLOT SEL. button.

- The access indicator of the selected CFast card slot will illuminate in green. On the HOME screen and at the bottom left of the monitoring screen, the CFast card currently selected is indicated with a ▶ mark next to the CFast card icon.

NOTES

- If both CFast card slots contain a CFast card and you open the cover of the selected slot, the camera will automatically switch to the other slot.
- You cannot use the SLOT SEL. button to switch between CFast card slots while recording.
- You can also perform this function remotely using Browser Remote on a connected network device (🕮 166, 170).

Relay Recording and Double Slot Recording

The camera features two convenient recording methods that can be used when both CFast card slots contain a CFast card: double slot recording and relay recording (XF-AVC clips only).

Double slot recording: This function records the same clip simultaneously to both CFast cards, which is a convenient way to make a backup copy of your recording while you record.

Relay recording: When the main recording format is set to [XF-AVC (CFast)], this function allows you to continue recording on another CFast card without interruption if the CFast card you are using becomes full. Relay recording is available from CFast card slot A to CFast card slot B, and vice versa.

To use double slot recording

1 Open the [Double Slot Rec] submenu.

MENU/EVF ▸ [Rec/Media Setup] ( ) ❯ [Double/Relay Rec] ❯ [Double Slot Rec]

2 Select [On] and then press SET.

- D appears on the HOME screen and at the bottom left of the monitoring screen.

To use relay recording

1 Open the [Relay Recording] submenu.

MENU/EVF ▸ [Rec/Media Setup] ( ) ❯ [Double/Relay Rec] ❯ [Relay Recording]

2 Select [On] and then press SET.

NOTES

- Relay recording is disabled (the camera will not switch to the other CFast card) when slow & fast motion recording is activated.
- If a CFast card becomes full during double slot recording, recording on both cards will stop. On the other hand, if an error occurs with one of the CFast cards, recording will continue on the other card.
- Double slot recording cannot be used together with relay recording or slow & fast motion recording.

Checking the Remaining Recording Time on Recording Media

The recording media icons and the approximate remaining recording time* (in minutes) on each card are displayed on the HOME screen and at the bottom left of the monitoring screen. Additionally, on the **INFO** ▸ [MEDIA] screen (□ 200), you can check the total space, used space, and remaining recording time* on each recording media.

* The approximate available recording time is based on the current bit rate (□ 65).

Recovering Clips

Some actions, such as suddenly turning off the camera or removing the recording media while data is being recorded, can cause data errors in the recorded XF-AVC or ProRes clip. If an error message appears in the **INFO** ▸ [LIVE] screen indicating that clips need recovering, you may be able to recover XF-AVC clips with data errors with the following procedure.

1 Press the PLAY button and select the recording media that contains the clip that needs to be recovered (□ 142).
   - Select [CFast (XF-AVC)], [CFast (ProRes)] or [SD Card (XF-AVC)] as the playback media/format. In the case of a CFast card, select the correct CFast card slot.

2 Press [CLIP LIST] to open the list of clips.

3 Turn the SELECT dial to find the clip that needs to be recovered and then press SET.
   - The message [Clip requires data recovery] appears instead of the clip details.

4 Open the recovery screen.

   [OPTIONS] ❯ [Recover Clip]

5 Press both [RECOVER] buttons simultaneously.
   - The camera will attempt to recover the corrupted data.

NOTES

- This procedure may delete XF-AVC clips shorter than 0.5 seconds in length. Additionally, up to 0.5 seconds may be deleted from the end of XF-AVC clips.
- In some cases, it may not be possible to recover the data. This is more likely when the file system is corrupted or the recording media is physically damaged.
- Only clips recorded with this camera can be recovered. Photos cannot be recovered.

Adjusting the Black Balance

You can have the camera adjust the black balance automatically when the ambient temperature changes considerably or if there is a noticeable change in a true black video signal.

1 Attach the body cap to the lens mount.

- If a lens was attached, turn off the camera and remove the lens. Place the body cap back on the lens mount and turn on the camera.

2 Open the [ABB] screen.

MENU ▸ [Camera Setup] ❯ [ABB]

- Complete the procedure following the messages on the camera's control display.

3 Press [OK].

- The automatic black balance procedure will start. It will take approximately 40 seconds.
- During the procedure, the monitoring screen will turn black.

4 When the confirmation message appears, press [OK].

- If the sensor is not completely shielded from light, [Error] will appear on the control display. Press [OK] and repeat the procedure from the beginning.

ⓘ NOTES

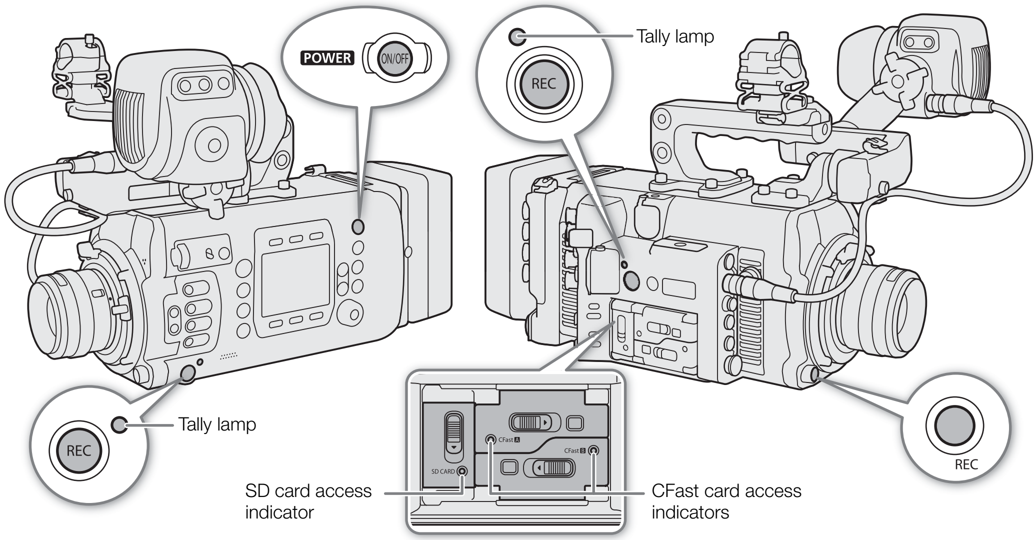
- Adjusting the black balance is necessary in the following cases:
  - When using the camera for the very first time or after a long period of not using it.
  - After sudden or extreme changes in ambient temperature.
  - After changing the ISO speed/gain settings.
  - After resetting all the camera's settings.
- During the adjustment of the black balance, you may notice some irregular displays appear on the monitoring screen. This is not a malfunction.

Recording Video

This section explains the basics of recording clips*. Before making important recordings for the first time, make test recordings using the video configuration(s) you plan to use to check that the camera operates correctly. Should the camera fail to operate correctly, refer to *Troubleshooting* (□ 201).

* "Clip" refers to a single movie unit recorded with a single recording operation. Some clips can include custom picture settings (□ 131) and metadata (□ 118).

Recording



1 Press the POWER button to turn on the camera.

- The camera turns on in record standby mode.
- The access indicators of card slots with a card inserted will illuminate momentarily in red. Then, the access indicator of the CFast card slot selected for recording will change to green.

2 Press the REC button to begin recording.

- Recording starts. The recording indicator on the HOME screen and at the bottom of the monitoring screen changes from [STBY] to [● REC]. While recording on a CFast card, the tally lamp will illuminate in red.
- You can also perform this function remotely using Browser Remote on a connected network device (□ 166, 170).
- For details about sub recordings refer to *Simultaneous Sub Recordings* (□ 71).

3 Press the REC button to stop recording.

- The clip is recorded to the recording media and the camera returns to record standby mode. The tally lamp will change back to green.

IMPORTANT

- Observe the following precautions while an access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not open the card slot cover of the card being accessed and do not remove the card.
  - Do not remove the power source or turn off the camera.
- Be sure to save your recordings regularly (158), especially after making important recordings. Canon shall not be liable for any loss or corruption of data.

NOTES

- If you record XF-AVC clips using the custom picture and metadata settings, those settings will be recorded with the XF-AVC clip. For more details, refer to *Custom Picture Settings* (131) and *Using Metadata* (118).
- If the camera switches to the other CFast card while recording video due to the relay recording function (52), the two parts (before/after the switch) will be recorded as separate clips.
- A single XF-AVC clip can be recorded continuously for up to 6 hours. At that point, a new clip will be created automatically and recording will continue on a separate clip.
- You can use the MENU ▸ [System Setup] ❯ [Rec Operation Beep] setting to make the camera emit a sound when you start/stop recording.
- If you set an assignable button to [Add OK Mark] or [Add ✓ Mark] (127), you can press the button to add an OK mark or ✓ mark to the last XF-AVC clip recorded.
- When you use a commercially available lens adapter and the image on the screen is inverted, you can use the MENU ▸ [System Setup] ❯ [Scan Reverse Rec] ❯ [Setting] setting to return the image to the correct orientation.

Key lock: Locking the camera's controls

To activate the key lock function, press and hold the 🔒 button. After the countdown that appears on the control display ends, all the physical controls (buttons, switches, etc.) will be locked except for the POWER, REC and 🔒 buttons*. This is useful in preventing settings from being changed due to inadvertently pressing the camera's buttons and controls. Press and hold the 🔒 button again for about 3 seconds to reactivate the controls.

Even when the camera's controls are locked, you can operate the camera using Browser Remote (166), an optional RC-V100 Remote Controller connected to the camera (123) or the controls on the lens. When an optional OU-700 Remote Operation Unit is connected to the camera, you can select whether its controls are locked along with those of the camera with the MENU ▸ [System Setup] ❯ [🔒 Button] setting.

* You can also choose to lock the REC buttons using the MENU ▸ [System Setup] ❯ [Key Lock] setting.

Onscreen Displays on the HOME Screen

Refer to this section for an explanation of the various controls and onscreen displays on the HOME screen, which appears on the camera's control display.



Screen buttons

Icon/Display	Description
000.00	Frame rate (📖 65) • When slow & fast motion recording is activated, the shooting frame rate is displayed instead (📖 68).
F0.0 / F00, T0.0 / T00, closed 00 stops	Aperture value (📖 79) and ND filter setting (📖 78)
000.00°, 1/0000, 000.00Hz	Shutter speed (📖 74)
000000, 00.0 dB	ISO speed/Gain (📖 76)
Canon Log 3, Canon Log 2, Canon Log, Wide DR, Normal 1 to Normal 4	[Gamma] setting in the custom picture file (📖 134)
C.Gamut, BT.2020, DCI-P3, BT.709	[Color Space] setting in the custom picture file (📖 134)
AWB, 0000±0	White balance (📖 86)

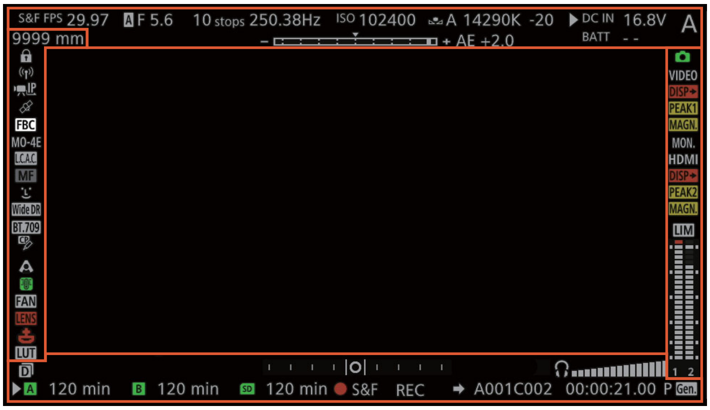
Information area (by groups, from left to right, top to bottom)

Icon/Display	Description
TC 00:00:00.00, TC 00:00:00:00	Time code (📖 101) • Depending on the operation, a letter may appear after the time code (📖 102).
Gen.	Genlock (📖 106)
Recording operation:	
STBY, ● REC	Clip recording: record standby, recording.
S&F STBY, ● S&F REC	Slow & fast motion recording (📖 68): record standby, recording.
➡	Output recording command (📖 189): in white – record standby, in red – recording.
D	Double slot recording (📖 52)
(icons), AP, (icon) and Remote, IP	Network connection status (📖 165)

Icon/Display	Description
Recording media status for the main recording ([Main]) and sub recording ([Sub])	
[A], [B], [SD] and 0000 min, SDI-OUT RAW	Recording media: in green – can record; in white – reading the recording media; in yellow – the recording media is almost full. The CFast card selected for recording is indicated with a ▶ mark.
[A⊘], [B⊘], [SD⊘] (in red)	No recording media or cannot record on the recording media.
0000x0000	Resolution (📖 65)
00.00P, 00.00i	Frame rate (📖 65)
XF-AVC(YCC), XF-AVC(RGB), ProRes(YCC), ProRes(RGB), RAW	Main recording format (📖 65)
CH1 ⋮ CH4	Audio level indicators CH1 to CH4 (📖 111)
[LIM]	Audio limiter (📖 111)
REEL A000	Camera index/reel number (📖 62)
CLIP C000	Clip number (📖 62)
DC IN 00.0V, BATT 00.0V(000%)	Power supply voltage (DC IN and battery) (📖 26): in red – low power warning. • The power source currently in use is indicated with a ▶ mark. • The percentage is displayed only when using a battery compatible with BMS (battery management system).
[key lock icon]	Key lock (📖 56)
[temperature icon]	Temperature warning (📖 63)
(INFO) (in yellow)	The INFO icon appears when there is an important notice or error message in the INFO ▸ [LIVE] screen (📖 198).
[GPS icon]	GPS signal (📖 120): continuously on – satellite signal acquired; flashing – satellite signal not acquired. • Displayed only when an optional GP-E1 GPS Receiver is connected to the camera.
[camera icon] (in green), [camera⊘ icon] (in red)	Photo recorded (📖 125) or no photo can be recorded.

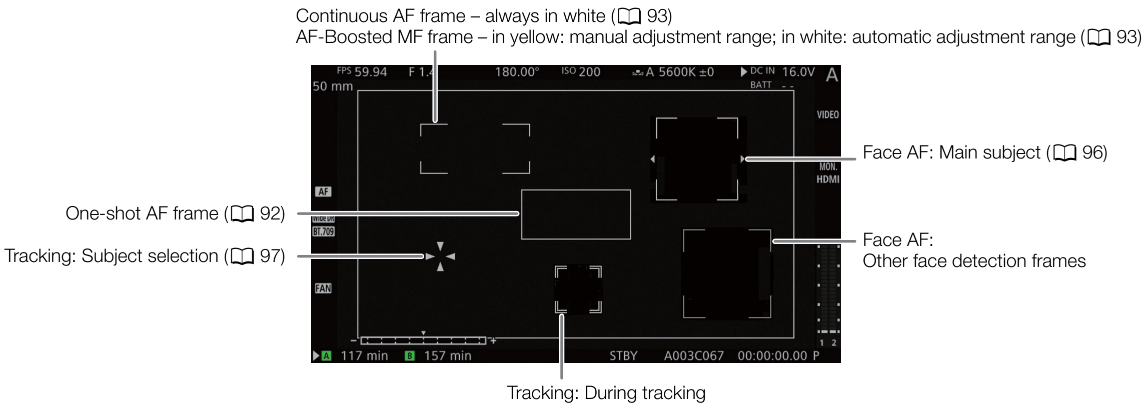
Onscreen Displays on the Shooting Screen

Refer to this section for an explanation of the various onscreen displays that appear on the shooting screen that is displayed on monitoring devices (optional viewfinder or external monitors). You can use the custom display function (📖 139) to turn off individual onscreen displays if they are not required. The menu item that controls each display is given in the following table (1: indicates a menu item under [Custom Display 1] and 2: indicates a menu item under [Custom Display 2]).



C700 AF frames

Depending on the focus function used you may see some of the following AF frames.



Left side of the screen

Icon/Display	Description	Custom Display
0000 mm	Approximate focal length of the lens	1: [Focal Length]
	Key lock (📖 56)	1: [Key Lock]
, AP, and Remote, IP	Network connection status (📖 165)	2: [Network Functions]
	GPS signal (📖 120): continuously on - satellite signal acquired; flashing - satellite signal not acquired. • Displayed only when an optional GP-E1 GPS Receiver is connected to the camera.	2: [GPS]
FBC	C700 C700 PL Flash band correction (📖 75)	1: [Flash Band Corr.]
MO-4E, MO-4P	B4 mount adapter (📖 187)	1: [Mount Adapter]
L.C.A.C.	Automatic lens chromatic aberration correction for broadcast lenses (📖 46)	–
MF, AF	C700 Focus mode (📖 89)	1: [Focus Mode]
	C700 Face AF (📖 96)	
C.LOG3, C.LOG2, C.LOG, Wide DR, NORM1, NORM2, NORM3, NORM4	[Gamma] setting in the custom picture file (📖 134)	1: [Custom Picture]
C.Gamut, BT.2020, DCI-P3, BT.709	[Color Space] setting in the custom picture file (📖 134)	
CP	Editing of the custom picture file's detailed settings ([Other Settings] ❯ [Activate]) is enabled (📖 135).	
	Light metering mode (📖 82)	1: [Light Metering]
	Temperature warning (📖 63)	2: [Temperature/Fan]
FAN	Fan operation (📖 63)	
LENS (in red)	Lens error warning (📖 202)	1: [Lens]
(in red)	Lithium button battery not inserted (📖 24)	2: [DC IN / Battery]
LUT	A viewing LUT has been applied to at least one video output (📖 154) • The icon will appear on all active display devices regardless of the video output to which the LUT was applied.	1: [LUT]

Top of the screen

Icon/Display	Description	Custom Display
FPS, S&F FPS and 000.00	Frame rate (📖 65) • When slow & fast motion recording is activated, the shooting frame rate ([S&F FPS]) is displayed instead (📖 68).	2: [Frame Rate]
A, F0.0 / F00, T0.0 / T00, closed	Aperture value (📖 79) • C700 PL C700 GS PL Only displayed when an EF Cinema lens compatible with aperture adjustment from the camera (📖 221), a compatible broadcast lens, or a PL lens compatible with Cooke's /i Technology metadata protocol is attached to the camera.	1: [Iris]
00 stops	ND filter (📖 78)	1: [ND Filter]
000.00°, 1/0000, 000.00Hz	Shutter speed (📖 74)	1: [Shutter]
ISO 000000, GAIN 00.0dB	ISO speed/Gain (📖 76)	1: [ISO/Gain]
AWB, A, B, , , WB1 to WB5 and 00000K ±00	White balance (📖 86)	1: [White Balance]

Icon/Display	Description	Custom Display
DC IN 00.0V, BATT 00.0V	Power supply voltage (DC IN and battery) (□ 26) • The power source currently in use is indicated with a ▶ mark.	2: [DC IN / Battery]
A to Z	Camera index (□ 62)	2: [Camera Index]
-⊏⁝⁝⁝⁝⁝⁝⁝⁝⊐+	Exposure bar (□ 82) • Only displayed when the gain, aperture and shutter are all set to manual adjustment.	1: [Exposure]
AE ±0.00	AE Shift (□ 82)	

Right side of the screen

Icon/Display	Description	Custom Display
(in green), (in red)	Photo recorded (□ 125) or no photo can be recorded.	2: [Remaining Photos]
DISP (in red)	Output onscreen displays (□ 155) • The icon can appear in the VIDEO area (optional viewfinder) or in the MON./HDMI area (external monitors).	2: [OSD Output]
PEAK1, PEAK2 (in yellow)	Peaking (□ 91) • The icon can appear in the VIDEO area (optional viewfinder) or in the MON./HDMI area (external monitors).	1: [Peaking]
MAGN. (in yellow), MAG (in red)	Magnification (□ 92) • The icon can appear in the VIDEO area (optional viewfinder) or in the MON./HDMI area (external monitors).	1: [Magnification]
LIM,	Audio limiter (□ 111)	2: [Audio Lvl Indicator]
1 2	Audio level meter and monitor channels (□ 111, 157)	

Bottom of the screen

Icon/Display	Description	Custom Display
D	Double slot recording (□ 52)	2: [Recording Mode]
ı ı ı ıOı ı ı ı	Camera level (□ 40)	2: [Level]
Headphone icon	Headphone volume (□ 143)	–
Recording media status and estimated remaining recording time		2: [Remaining Rec Time]
A, B, SD and 0000 min	Recording media status: in green - can record; in white - reading the recording media; in yellow - the recording media is almost full. The CFast card selected for recording is indicated with a ▶ mark.	
A, B, SD (in red)	No recording media or cannot record on the recording media.	
Recording operation:		2: [Recording Mode]
STBY, ● REC	Clip recording: record standby, recording.	
S&F STBY, ● S&F REC	Slow & fast motion recording (□ 68): record standby, recording.	
➡	Output recording command (□ 189): in white – record standby, in red – recording.	2: [Rec Command]
A001C001 to Z999D999	Clip identification. Includes the camera index, reel number and clip number components of the clip file name (□ 62).	2: [Reel/Clip Number]
00:00:00.00, 00:00:00:00	Time code (□ 101) • Depending on the operation, a letter may appear after the time code (□ 102).	2: [Time Code]
Gen.	Genlock (□ 106)	2: [Genlock]

NOTES

- You can use the MENU ▶ [Monitoring Setup] ❯ [Surrounding Area] settings to show on the monitoring screen more of the periphery around the area that is actually recorded by the camera.
- You can use the MENU ▶ [Monitoring Setup] ❯ [OSD Output] ❯ [VIDEO] or [MON.+HDMI] ❯ [Peripheral Border] setting to change whether the camera's onscreen displays appear on the image or in the margins around the image (the default setting).
- You can also choose not to output the onscreen displays to monitoring devices (155).

Setting the Clip File Name

The camera allows you to change several settings that determine the file name of the recorded clips. Personalize the clip file name according to your preferences or organizational conventions to create files that are easier to identify and organize.

The basic file name structure is as follows. When the simultaneous sub recording of XF-AVC Proxy clips is activated, the file names of the main and sub recording clips will be identical for the most part (components 1 to 6).

A	001	C001	_	yymmdd	XX	_	CANON	_01P
1	2	3		4	5		6	7

1 **Camera index:** One character (A to Z) that identifies the camera used.
2 **Reel number:** 3 characters (001 to 999) that identify the recording media used.
3 **Clip number:** 4 characters (C001 to D999). The clip number advances automatically with each clip recorded (switching to D001 after C999), but you can set the initial clip number.
4 Recording date (set automatically by the camera).
5 Random component: 2 characters (numbers 0 to 9 and capital letters A to Z) that change randomly with each clip.
6 **User defined field:** 5 characters (numbers 0 to 9 and capital letters A to Z) for any other identification purposes.
7 The camera will automatically add the suffix "_P" to the file name of XF-AVC Proxy clips. Additionally, when an SDHC card is used to record XF-AVC Proxy clips, a stream number (01 to 99) will be added before the "P". The stream number will advance every time the video (stream) file within the clip is split and recording continues on a separate stream file.

Setting the components of the clip file name

To set the camera index

1 Open the [Camera Index] screen.

MENU/EVF ▶ [Rec/Media Setup] () ❯ [Metadata] ❯ [Camera Index]

2 Turn the SELECT dial to select the desired camera index.

3 Press [OK] (camera menu) or press SET twice (monitoring menu).

To set the reel number or initial clip number

1 Open the [Reel Number] or [Clip Number] screen.

MENU/EVF ▸ [Rec/Media Setup] ( ) ▸ [Metadata] ▸ [Reel Number] or [Clip Number]

2 Monitoring menu only: Select [Set] and then press SET.

- To reset the reel/clip number to [001], select [Reset] instead.

3 Set the desired reel/clip number using the keyboard screen (📖 37).

- Camera menu only: Press [RESET] to reset the reel/clip number to [001].

4 If you changed the reel number, initialize all the recording media being used for recording (CFast and SD cards, 📖 51).

To set the user-defined field

1 Open the [User Defined] screen.

MENU/EVF ▸ [Rec/Media Setup] ( ) ▸ [Metadata] ▸ [User Defined]

2 Set the desired text/number using the keyboard screen (📖 37).

- Camera menu only: Press [RESET] to reset the user-defined field to [CANON].

Using the Fan

The camera uses an internal cooling fan to reduce the camera's internal heat. In shooting mode, you can change the fan's operation mode and speed. In playback mode, the fan runs at all times but you can select its speed.

Setting the Fan's Operation in Shooting Mode

In addition to the fan's operation mode, you can select independently the fan speed used while recording and in record standby mode.

1 Open the fan's [Mode] submenu.

MENU/EVF ▸ [System Setup] ( ) ▸ [Fan] ▸ [Mode]

2 Select the desired option and then press SET.

If you selected [Automatic]:

3 To set the fan speed to be used while recording, select [Fan Speed (REC)] and then press SET.

4 Select the desired fan speed and then press SET.

- Repeat steps 3 and 4, selecting [Fan Speed (STBY)] to set the fan speed in record standby mode.
- The [Maximum] option offers the maximum cooling effect but is available only for [Fan Speed (STBY)], as it is noisier.

If you selected [Always On]:

3 Select [Fan Speed (Always)] and then press SET.

4 Select the desired fan speed and then press SET.

Options

[Automatic]: The fan runs while the camera is not recording and is automatically turned off while the camera is recording. However, if the internal temperature of the camera is too high (appears in red on the HOME screen and at the left of the monitoring screen), the fan will be activated automatically (in that case, FAN will appear under the icon on the monitoring screen only). When the camera's temperature has decreased sufficiently, the fan will be turned off. Use this setting when you do not want the camera to pick up the fan's operating sound.

[Always On]: The fan runs at all times.

Setting the Fan Speed in Playback Mode

1 Press the PLAY button to open the playback control screen.

2 Open the [Fan Speed] submenu.

MENU/EVF ▸ [System Setup] (🔧) ▸ [Fan Speed]

3 Select the desired fan speed and then press SET.

IMPORTANT

- While the fan is running, the exhaust vent will emit warm air.
- Be careful not to obstruct in any way the fan's air vents (📖 14).

NOTES

- Depending on the ambient temperature and other shooting conditions, the fan may not turn off even if you set its operating mode to [Automatic].

Video Configuration: Video Format, System Frequency, Frame Rate, Resolution and Bit Rate

With the following procedures you can set the video configuration used for main recording clips recorded on a CFast card in the camera. Select the video format, resolution (frame size) and color sampling settings, bit rate and frame rate that best match your creative needs. Available options for some settings may change depending on previous selections for other settings. See the tables following the procedures for a summary.
For details about the video configuration of sub recordings (XF-AVC Intra or XF-AVC Proxy clips), refer to *Simultaneous Sub Recordings* (□ 71). For available video configurations when using a CDX-36150 Recorder docked with the camera, refer to *Codex Recorder - Guide for the EOS C700 models* (separate PDF file). For available video configurations when using an external recorder connected to one of the SDI OUT terminals, refer to *Video Output Configuration* (□ 149).

Selecting the Main Recording Format

1 Open the [Main Rec Format] submenu.

MENU/EVF ▸ [Rec/Media Setup] ( ) ❯ [Main Rec Format]

• Alternatively, using the HOME screen: **HOME** ▸ [S&F FPS] ❯ [OPTIONS] ❯ [Main Rec Format].

2 Select [XF-AVC (CFast)] or [ProRes (CFast)] and then press SET.

Selecting the System Frequency

1 Open the [System Frequency] submenu.

MENU/EVF ▸ [Rec/Media Setup] ( ) ❯ [System Frequency]

• Alternatively, using the HOME screen: **HOME** ▸ [S&F FPS] ❯ [OPTIONS] ❯ [System Frequency].

2 Select the desired option and then press SET.

• The camera will reset and restart in the selected mode.

Selecting the Frame Rate

This procedure is not necessary when the system frequency is set to [24.00 Hz].

1 Open the [Frame Rate] submenu.

MENU/EVF ▸ [Rec/Media Setup] ( ) ❯ [Frame Rate]

• Alternatively, using the HOME screen: **HOME** ▸ [S&F FPS] ❯ [OPTIONS] ❯ [Frame Rate].

2 Select the desired option and then press SET.

Selecting the Resolution and Color Sampling Settings

1 Open the [Resolution/Sampling] submenu.

MENU/EVF ▸ [Rec/Media Setup] ( ) ❯ [Resolution/Sampling]

• Alternatively, using the HOME screen: **HOME** ▸ [S&F FPS] ❯ [OPTIONS] ❯ [Resolution/Sampling].

2 Select the desired option and then press SET.

Selecting the Bit Rate

1 Open the [Bit Rate] submenu.

MENU/EVF ▶ [Rec/Media Setup] ( ) ❯ [Bit Rate]

- Alternatively, using the HOME screen: **HOME** ▶ [S&F FPS] ❯ [OPTIONS] ❯ [Bit Rate].

2 Select the desired option and then press SET.

Available video configuration settings (XF-AVC)

Resolution and color sampling		Bit rate and compression[1]	System frequency/Frame rate			
			59.94 Hz			
			59.94P	59.94i[2]	29.97P	23.98P
4096x2160 3840x2160	YCbCr 4:2:2, 10 bit	810 Mbps, Intra-frame	●	–	–	–
		410 Mbps, Intra-frame	–	–	●	●
2048x1080 1920x1080	RGB 4:4:4, 12 bit	440 Mbps, Intra-frame	●	–	–	–
		225 Mbps, Intra-frame	–	–	●	●
	RGB 4:4:4, 10 bit	410 Mbps, Intra-frame	●	–	–	–
		210 Mbps, Intra-frame	–	–	●	●
	YCbCr 4:2:2, 10 bit	310 Mbps, Intra-frame	●	–	–	–
		160 Mbps, Intra-frame	–	–	●	●
		50 Mbps, Long GOP	●	●	●	●

Resolution and color sampling		Bit rate and compression[1]	System frequency/Frame rate			
			50.00 Hz			24.00 Hz
			50.00P	50.00i[2]	25.00P	24.00P
4096x2160 3840x2160	YCbCr 4:2:2, 10 bit	810 Mbps, Intra-frame	●	–	–	–
		410 Mbps, Intra-frame	–	–	●	●
2048x1080 1920x1080	RGB 4:4:4, 12 bit	440 Mbps, Intra-frame	●	–	–	–
		225 Mbps, Intra-frame	–	–	●	●
	RGB 4:4:4, 10 bit	410 Mbps, Intra-frame	●	–	–	–
		210 Mbps, Intra-frame	–	–	●	●
	YCbCr 4:2:2, 10 bit	310 Mbps, Intra-frame	●	–	–	–
		160 Mbps, Intra-frame	–	–	●	●
		50 Mbps, Long GOP	●	●	●	●

[1] The camera uses a variable bit rate (VBR). Intra-frame options compress the image after analyzing each frame separately and are more appropriate for editing. Long GOP options compress the image after analyzing also changes across a group of pictures and offer better compression (smaller data size).
[2] Only when the resolution is set to 1920x1080.

Available video configuration settings (ProRes)

Resolution, codec[3] and color sampling		System frequency/Frame rate					
		59.94 Hz			50.00 Hz		24.00 Hz
		59.94P	29.97P	23.98P	50.00P	25.00P	24.00P
4096x2160 3840x2160	ProRes 422 HQ, 10 bit	–	●	●	–	●	●
2048x1080 1920x1080	ProRes 4444[4], 12 bit	●	●	●	●	●	●
	ProRes 422 HQ[5], 10 bit	●	●	●	●	●	●

[3] Selected with the MENU ▸ [Rec/Media Setup] ❯ [Bit Rate] setting.
[4] The alpha channel is not used.
[5] When slow & fast motion recording is activated in crop mode ([On (crop)], the codec will change to ProRes 422 instead.

NOTES

- A single CFast card cannot be used to record XF-AVC clips using different system frequencies.
- For details on the signal output from each terminal, refer to *Video Output Configuration* (📖 149).
- While IP streaming is activated, the video configuration (main recording format, system frequency, frame rate, resolution/color sampling) cannot be changed.

Slow & Fast Motion Recording

The camera can record using a progressive frame rate (shooting frame rate) that is different from the playback frame rate. Recording a clip at a higher frame rate than the [Frame Rate] setting will result in a slow motion effect during playback (up to 1/10 of the original speed). Conversely, a lower frame rate will result in a fast motion effect (up to 60x the original speed).
In most cases, sound is not recorded when slow & fast motion recording is activated. However, sound will be recorded if the main recording format is set to [XF-AVC (CFast)] and the shooting frame rate is the same as the frame rate in the video configuration.

Available shooting frame rates (XF-AVC)

Video configuration			Shooting frame rate (fps)
Frame rate	Vertical resolution	Color sampling[1]	
59.94P	2160	YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 59.94
	1080	RGB 4:4:4, 10 bit, RGB 4:4:4, 12 bit	
		YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 59.94, 89.91, 119.88
	1080 (cropped)[2, 3]		1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 59.94, 89.91, 119.88, 149.85, 179.82, 209.79, 239.76
29.97P	2160	YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94
	1080	RGB 4:4:4, 10 bit, RGB 4:4:4, 12 bit	
		YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94, 89.91, 119.88
	1080 (cropped)[2, 4]		1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94, 89.91, 119.88, 149.85, 179.82, 209.79, 239.76
24.00P	2160[5]	YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 6.00, 12.00, 24.00, 26.00, 28.00, 30.00, 32.00, 36.00, 40.00, 44.00, 48.00, 52.00, 56.00, 60.00
	1080	RGB 4:4:4, 10 bit, RGB 4:4:4, 12 bit	
		YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 6.00, 12.00, 24.00, 26.00, 28.00, 30.00, 32.00, 36.00, 40.00, 44.00, 48.00, 52.00, 56.00, 60.00, 72.00, 96.00, 120.00
	1080 (cropped)[2, 4]		1.00, 2.00, 3.00, 6.00, 12.00, 24.00, 26.00, 28.00, 30.00, 32.00, 36.00, 40.00, 44.00, 48.00, 52.00, 56.00, 60.00, 72.00, 96.00, 120.00, 144.00, 168.00, 192.00, 216.00, 240.00
23.98P	2160[5]	YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 5.99, 11.99, 23.98, 25.97, 27.97, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94
	1080	RGB 4:4:4, 10 bit, RGB 4:4:4, 12 bit	
		YCbCr 4:2:2, 10 bit	1.00, 2.00, 3.00, 5.99, 11.99, 23.98, 25.97, 27.97, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94, 71.93, 95.90, 119.88
	1080 (cropped)[2, 4]		1.00, 2.00, 3.00, 5.99, 11.99, 23.98, 25.97, 27.97, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94, 71.93, 95.90, 119.88, 143.86, 167.83, 191.81, 215.78, 239.76
50.00P	2160	YCbCr 4:2:2, 10 bit	1.00, 5.00, 15.00, 25.00, 50.00
	1080	RGB 4:4:4, 10 bit, RGB 4:4:4, 12 bit	
		YCbCr 4:2:2, 10 bit	1.00, 5.00, 15.00, 25.00, 50.00, 54.00, 58.00, 75.00, 100.00
	1080 (cropped)[2, 3]		1.00, 5.00, 15.00, 25.00, 50.00, 54.00, 58.00, 75.00, 100.00, 125.00, 150.00, 175.00, 200.00

Video configuration			Shooting frame rate (fps)
Frame rate	Vertical resolution	Color sampling[1]	
25.00P	2160	YCbCr 4:2:2, 10 bit	1.00, 5.00, 15.00, 25.00, 26.00, 28.00, 30.00, 34.00, 38.00, 42.00, 46.00, 50.00
	1080	RGB 4:4:4, 10 bit, RGB 4:4:4, 12 bit	
		YCbCr 4:2:2, 10 bit	1.00, 5.00, 15.00, 25.00, 26.00, 28.00, 30.00, 34.00, 38.00, 42.00, 46.00, 50.00, 54.00, 58.00, 75.00, 100.00
	1080 (cropped)[2, 4]		1.00, 5.00, 15.00, 25.00, 26.00, 28.00, 30.00, 34.00, 38.00, 42.00, 46.00, 50.00, 54.00, 58.00, 75.00, 100.00, 125.00, 150.00, 175.00, 200.00

[1] Part of the **MENU** ▸ [Rec/Media Setup] ❯ [Resolution/Sampling] setting.
[2] Only when **HOME** ▸ [S&F FPS] ❯ [ACTIVATE] is set to [On (crop)].
[3] When the shooting frame rate is 125 fps or higher, the bit rate will change to 170 Mbps instead.
[4] When the shooting frame rate is 125 fps or higher, the bit rate will change to 90 Mbps instead.
[5] When the shooting frame rate is 30 fps or higher, the bit rate will change to 360 Mbps instead.

Available shooting frame rates (ProRes)

Video configuration			Shooting frame rate (fps)
Frame rate	Vertical resolution	Codec[6]	
59.94P	1080	ProRes 4444 ProRes 422 HQ	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 59.94
	1080 (cropped)[7]	ProRes 422	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 59.94, 89.91, 119.88, 149.85, 179.82
29.97P	2160	ProRes 422 HQ	1.00, 2.00, 3.00, 5.99, 14.99, 29.97
	1080	ProRes 4444 ProRes 422 HQ	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94
	1080 (cropped)[7]	ProRes 422	1.00, 2.00, 3.00, 5.99, 14.99, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94, 89.91, 119.88, 149.85, 179.82
24.00P	2160	ProRes 422 HQ	1.00, 2.00, 3.00, 6.00, 12.00, 24.00, 26.00, 28.00, 30.00
	1080	ProRes 4444 ProRes 422 HQ	1.00, 2.00, 3.00, 6.00, 12.00, 24.00, 26.00, 28.00, 30.00, 32.00, 36.00, 40.00, 44.00, 48.00, 52.00, 56.00, 60.00
	1080 (cropped)[7]	ProRes 422	1.00, 2.00, 3.00, 6.00, 12.00, 24.00, 26.00, 28.00, 30.00, 32.00, 36.00, 40.00, 44.00, 48.00, 52.00, 56.00, 60.00, 72.00, 96.00, 120.00, 144.00, 168.00
23.98P	2160	ProRes 422 HQ	1.00, 2.00, 3.00, 5.99, 11.99, 23.98, 25.97, 27.97, 29.97
	1080	ProRes 4444 ProRes 422 HQ	1.00, 2.00, 3.00, 5.99, 11.99, 23.98, 25.97, 27.97, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94
	1080 (cropped)[7]	ProRes 422	1.00, 2.00, 3.00, 5.99, 11.99, 23.98, 25.97, 27.97, 29.97, 31.97, 35.96, 39.96, 43.96, 47.95, 51.95, 55.94, 59.94, 71.93, 95.90, 119.88, 143.86, 167.83
50.00P	1080	ProRes 4444 ProRes 422 HQ	1.00, 5.00, 15.00, 25.00, 50.00
	1080 (cropped)[7]	ProRes 422	1.00, 5.00, 15.00, 25.00, 50.00, 54.00, 58.00, 75.00, 100.00, 125.00, 150.00
25.00P	2160	ProRes 422 HQ	1.00, 5.00, 15.00, 25.00
	1080	ProRes 4444 ProRes 422 HQ	1.00, 5.00, 15.00, 25.00, 26.00, 28.00, 30.00, 34.00, 38.00, 42.00, 46.00, 50.00
	1080 (cropped)[7]	ProRes 422	1.00, 5.00, 15.00, 25.00, 26.00, 28.00, 30.00, 34.00, 38.00, 42.00, 46.00, 50.00, 54.00, 58.00, 75.00, 100.00, 125.00, 150.00

[6] Selected with the **MENU** ▸ [Rec/Media Setup] ❯ [Bit Rate] setting.
[7] Only when **HOME** ▸ [S&F FPS] ❯ [ACTIVATE] is set to [On (crop)].

1 **Open the slow & fast motion selection screen/submenu.**

Home screen: HOME ▸ [S&F FPS] ➤ [ACTIVATE]
Monitoring menu: EVF ▸ [Rec/Media Setup] (⚙) ➤ [Slow & Fast Motion]

2 **Select [On] or [On (crop)] and then press SET.**

- With the [On (crop)] option, you can select a shooting frame rate up to 240 fps but the resolution is lowered to 2K (2048x1080 or 1920x1080) and the color sampling is changed to YCbCr 4:2:2, 10 bit.
- HOME screen: The current shooting frame rate appears on the control display marked with an orange selection frame.
  Monitoring menu: Close the menu. On the monitoring screen, the recording operation indicator changes to [S&F STBY].

3 **Select the desired shooting frame rate.**

HOME screen: Turn the SELECT dial to select the desired frame rate and then press SET.
Monitoring menu: Set the shooting frame rate using the direct setting mode (📖 73).

- Available shooting frame rates will vary depending on the video configuration (frame rate, resolution, color sampling, etc.) in use.
- The selected shooting frame rate appears on the HOME screen and at the top left of the monitoring screen.

4 **Press the REC button to begin recording.**

- The tally lamp illuminates in red and [S&F STBY] changes to [● S&F REC] while recording.
- The clip is recorded at the selected frame rate.

5 **Press the REC button again to stop recording.**

- The tally lamp will change back to green and the recording operation indication will change back to [S&F STBY].

6 **When you have finished recording, turn off the slow & fast motion recording mode.**

- Repeat steps 1 and 2, selecting [Off] instead.

ⓘ NOTES

- The shooting frame rate cannot be changed while recording.
- The time code signal will not be output from the TIME CODE IN/OUT terminal or MON. terminals.
- For slower shooting frame rates, it may take a few seconds to stop recording.
- If the system frequency is changed, slow & fast motion recording will be canceled and the shooting frame rate will be reset to its default value.
- When the main recording format is set to [RAW (SDI OUT)], slow & fast motion recording in crop mode ([On (crop)]) is not available.
- When slow & fast motion recording is activated in crop mode ([On (crop)]) and a shooting frame rate of 125 fps or higher is selected, if the bit rate was set to 310 Mbps, it will automatically change to 170 Mbps; if it was set to 160 Mbps, it will automatically change to 90 Mbps.

Simultaneous Sub Recordings

You can record the same scene as the main recording also as a sub recording – a secondary recording with a lower video configuration and smaller file sizes. For example, you can record XF-AVC clips on a CFast card while the camera records or outputs RAW data, or record XF-AVC Proxy clips on the SD card while using the CFast card for the main recording.
The video configuration of XF-AVC (Intra) sub recordings on the CFast card can be selected but that of XF-AVC Proxy sub recordings on the SD card cannot be changed. XF-AVC Proxy clips have a video configuration of 2K with YCbCr 4:2:0, 8-bit color sampling and a bit rate of 24 Mbps or 35 Mbps*, which makes them very convenient for offline editing. Additionally, by specifying a LUT, you can obtain XF-AVC Proxy clips with different color space/gamma characteristics from those of the main recording.
* Determined automatically depending on the video configuration of the main recording.

Video configuration of sub recording clips

Recording media	Main recording video configuration		Sub recording video configuration*		
	Resolution	Frame rate	Resolution**	Color sampling	Bit rate and compression
SD card (XF-AVC Proxy)	4096x2160 2048x1080	59.94P, 50.00P	2048x1080	YCbCr 4:2:0, 8 bit	35 Mbps, Long GOP
	3840x2160 1920x1080		1920x1080		
	4096x2160 2048x1080	29.97P, 25.00P, 24.00P, 23.98P	2048x1080		24 Mbps, Long GOP
	3840x2160 1920x1080		1920x1080		
	1920x1080	59.94i, 50.00i	1920x1080		
CFast (XF-AVC)	–	59.94P, 50.00P	4096x2160 3840x2160	YCbCr 4:2:2, 10 bit	810 Mbps, Intra-frame
			2048x1080 1920x1080		310 Mbps, Intra-frame
		29.97P, 25.00P, 24.00P, 23.98P	4096x2160 3840x2160		410 Mbps, Intra-frame
			2048x1080 1920x1080		160 Mbps, Intra-frame

* The frame rate and audio recording settings will be the same as those used for the main recording.
** Determined automatically for XF-AVC Proxy clips on the SD card. Selected with the MENU ► [Rec/Media Setup] ❯ [Sub Rec (XF-AVC)] ❯ [Resolution/Sampling] setting for XF-AVC clips on the CFast card.

1 Open the sub recording [Recording Media] submenu.
MENU/EVF ► [Rec/Media Setup] (🎞) ❯ [Sub Rec (XF-AVC)] ❯ [Recording Media]

2 Select [CFast] (XF-AVC clips) or [SD Card] (XF-AVC Proxy clips) and then press set.
- [CFast] is only available when the main recording format is set to one of the RAW options.

For XF-AVC sub recordings ([CFast]) only:

3 To change the resolution of the XF-AVC clips, select [Resolution/Sampling] from the same submenu.

4 Select the desired option and then press SET.

For XF-AVC Proxy sub recordings ([SD Card]) only, when using one of the Canon Log gamma curves:

3 To apply a LUT to the XF-AVC Proxy clips, open the LUT selection screen.
HOME screen: HOME ► [COLOR] ❯ [LUT] ❯ [SD XF-AVC]
Monitoring menu: From the same submenu select [Apply LUT].

4 **Select the desired LUT and then press SET.**

5 **Press the REC button to start and stop recording.**

- The sub recording clip will be recorded on the CFast or SD card simultaneously with the main recording.

IMPORTANT

- Observe the following precautions while an access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not open the card slot cover of the card being accessed and do not remove the card.
  - Do not remove the power source or turn off the camera.

NOTES

- If the main recording stops during simultaneous recording, the sub recording will stop as well.
- Sub recording clips are not recorded during slow & fast motion recording.
- During relay recording, if the camera switches from recording on one CFast card to the other (main recording), the recording of the XF-AVC Proxy clip on the SD card (sub recording) will be interrupted as well and continue as a separate XF-AVC Proxy clip.
- When an SDHC card is used to record XF-AVC Proxy clips, the video (stream) file in an XF-AVC Proxy clip will be split approximately every 4 GB for clips with long recording times. Still, playback on the camera will be continuous.
- Available LUT options may vary depending on the current [Gamma] and [Color Space] settings in the custom picture file (📖 134). Also, when those settings are changed, the LUT will be removed ([Apply LUT] will be reset to [Off]).
- When simultaneous sub recording is activated but no CFast card is inserted in the camera:
  - If the main recording format is set to [XF-AVC (CFast)], only the sub recording (XF-AVC Proxy) clips are recorded on the SD card.
  - If the main recording format is set to [ProRes (CFast)], sub recording clips will not be recorded either.

Changing Main Camera Functions with the FUNC Button

With the direct setting mode you can adjust the following main functions using the optional viewfinder's FUNC button or an assignable button set to [FUNC] while checking the effect on the image on a monitoring device. This section will explain the basic operation of the direct setting mode with the optional viewfinder. For details about the functions, refer to each function's section.

Available functions (pushing the joystick right to cycle)
Shooting frame rate for slow & fast motion recording* (🕮 68) → Shutter speed (🕮 74) → ISO speed/gain (🕮 76) → White balance (mode, color temperature value and color compensation, 🕮 86)

* Only when slow & fast motion recording is activated.

Using the Direct Setting Mode

1 Press the FUNC button on the optional viewfinder or an assignable button set to [FUNC] (🕮 127).
- On the monitoring screen, the icon or onscreen display of the function selected to be adjusted will be highlighted with an orange underline.
- Press the FUNC button/assignable button repeatedly or push the joystick left/right to select the function you wish to adjust.
- Alternatively, you can press an assignable button set to [Slow&Fast Frame Rate], [Shutter], [ISO/Gain] or [White Balance] (🕮 127) to start the direct setting mode with the respective function already underlined.

2 Turn the SELECT dial or push the joystick up/down to select the desired value or white balance mode and then press SET.
- The selected value/mode will be set and the camera will exit the direct setting mode (the orange underline will disappear).
- You can press the BACK button instead to end the direct setting mode without changing the current value/mode.

Shutter Speed

Set the shutter speed based on the recording conditions. For example, you may want to set slower shutter speeds in darker environments. The camera offers the following modes.
You can also perform this function remotely using Browser Remote on a connected network device (🕮 166, 172).

[Speed]: Allows you to set the shutter speed (in fractions of a second). You can select the increment to use when adjusting the shutter speed between 1/3-stop and 1/4-stop increments.

[Angle]: You can set the shutter angle to determine the shutter speed.

[Clear Scan]: Set the frequency in order to record CRT computer monitors without black bands or flicker on the screen.

[Slow]: You can set slower shutter speeds to obtain brighter recordings in places with insufficient lighting. This mode is not available during slow & fast motion recording.

[Off]: The camera uses a standard shutter speed based on the frame rate.

Available shutter speeds
The available shutter speeds vary depending on the system frequency and frame rate used.

Shutter speed mode		System frequency/Frame rate					
		59.94 Hz			24.00 Hz	50.00 Hz	
		59.94P / 59.94i	29.97P	23.98P	24.00P	50.00P/ 50.00i	25.00P
[Speed][1]	1/3-stop increments	1/1 to 1/2000 (34 settings in total)					
	1/4-stop increments	1/1 to 1/2000 (45 settings in total)					
[Angle][1]		360.00°, 240.00°, 180.00°, 120.00°, 90.00°, 60.00°, 45.00°, 30.00°, 22.50°, 15.00°, 11.25° Also angle values equivalent to the following shutter speeds: 1/120, 1/100, 1/60, 1/50, 1/40, 3/100, 1/30, 1/25.					
[Clear Scan][1]		23.98 Hz to 250.38 Hz			24.00 Hz to 250.40 Hz		
[Slow][2]		1/4, 1/8, 1/15, 1/30	1/4, 1/8, 1/15	1/3, 1/6, 1/12		1/3, 1/6, 1/12, 1/25	1/3, 1/6, 1/12
[Off][1]		1/60	1/30	1/24		1/50	1/25

[1] When slow & fast motion recording is activated, available values will vary depending on the selected shooting frame rate.
[2] Not available when slow & fast motion recording is activated.

Changing the Shutter Speed Mode and Value

1 Open the shutter speed [Mode] submenu.

HOME screen: **HOME** ▸ [SHUTTER] ➋ [OPTIONS] ➋ [Mode]
Monitoring menu: **EVF** ▸ [Camera Setup] (🎥) ➋ [Shutter] ➋ [Mode]

2 Select the desired mode and then press SET.

- If you selected [Speed], continue the procedure to select the increment scale to use when adjusting the shutter speed; otherwise, skip to step 5.

3 From the same submenu select [Shutter Increment].

4 Select [1/3 stop] or [1/4 stop] and then press SET.

5 HOME screen: Press the BACK button.
Monitoring menu: Press the EVF button twice to close the menu.

- The current shutter speed (or angle value or clear scan frequency) appears on the control display marked with an orange selection frame and also at the top of the monitoring screen.

6 Set the desired shutter speed.

Camera menu: Turn the SELECT dial to select the desired value and then press SET.
Monitoring menu: Set the shutter speed value using the direct setting mode (📖 73).

- The selected shutter speed value appears on the HOME screen and at the top of the monitoring screen.

Using Slow Shutter Mode
When recording in dark surroundings, you can obtain a brighter picture by using the slow shutter mode. You can also use this mode when you wish to add certain effects to your recordings, such as blurring the background during panning shots or recording a moving subject with an afterimage trail.

- Image quality may not be as good as when using faster shutter speeds in brighter surroundings.

ⓘ NOTES

- C700 C700 PL When recording under artificial light sources such as fluorescent, mercury or halogen lamps, the screen may flicker depending on the shutter speed. You may be able to avoid flicker by setting the shutter speed mode to [Speed] and the shutter speed to a value matching the frequency of the local electrical system: 1/25, 3/100, 1/50 or 1/100 for 50 Hz systems; 1/30, 1/40, 1/60 or 1/120 for 60 Hz systems. You can also set an angle value corresponding to the shutter speeds mentioned above.
- Closing down the aperture when recording under bright conditions may cause the picture to appear soft or out of focus. To avoid the loss of sharpness due to diffraction, use a faster shutter speed, a denser ND filter (📖 78) or open up the aperture.
- C700 C700 PL When the frame rate is set to 59.94i, 59.94P, 50.00i or 50.00P, if the shutter speed mode is set to [Off] and slow & fast motion is not activated, you can use the **MENU** ▸ [Camera Setup] ➋ [Flash Band Corr.] setting to have the camera detect partial flash banding on consecutive frames and correct this to minimize the number of unusable frames. The flash band correction will be deactivated in the following cases.
  - When the frame rate or shutter speed mode is changed.
  - When slow & fast motion is activated.
  - When the camera is turned off or the PLAY button is pressed (switching to playback mode).
- When the shutter speed mode is set to [Slow], bright red, green or blue dots may appear on the monitoring screen. In such case, use a faster shutter speed or select a lower ISO speed or gain value (📖 76).
- When using slow shutter speeds, if a very bright subject moves in the image or the brightness increases suddenly due to a flash or other strong light, some color may appear in the brightest areas of the image. Increasing the ISO speed/gain value may solve this.
- When an optional RC-V100 Remote Controller is connected to the camera, you can change the shutter speed mode with the remote controller's SHUTTER SELECT button and the shutter speed value with the remote controller's SHUTTER ▲/▼ buttons.

ISO Speed/Gain

Depending on the shooting conditions, you may want to adjust the brightness of the image. You can do so by changing the ISO speed or gain value to adjust the sensitivity of the sensor. You can also perform this function remotely using Browser Remote on a connected network device (📖 166, 172).
The minimum sensitivity needed to obtain the recommended dynamic range depends on the camera model and other settings.

Model and other conditions	[Gamma] setting in the custom picture file (📖 134)	
	[Canon Log] or [Wide DR]	[Canon Log 2] or [Canon Log 3]
C700 C700 PL	ISO 400 / 6 dB	ISO 800 / 12 dB
C700 GS PL condition set ①: Slow & fast motion recording is not activated.	ISO 800 / 6 dB	ISO 1600 / 12 dB
C700 GS PL condition set ②: Slow & fast motion recording is activated ([On] or [On (crop)]).	ISO 1600 / 12 dB	ISO 3200 / 24 dB

Available ISO speed and gain settings

C700 C700 PL	ISO/Gain increment	Normal range	Extended range*
ISO speed	[1 stop] (1-stop increments)	160**, 200, 400, 800, 1600, 3200, 6400, 12800, 25600	100, 51200, 102400
	[1/3 stop] (1/3-stop increments)	160, 200, 250, 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000, 12800, 16000, 20000, 25600	100, 125, 32000, 40000, 51200, 64000, 80000, 102400
Gain	[Normal] (3-dB increments)	–2 dB**, 0 dB to 42 dB	–6 dB, –3 dB, 45 dB to 54 dB
	[Fine] (0.5-dB increments)	2 dB to 42 dB	42.5 dB to 54 dB

C700 GS PL	ISO/Gain increment	Normal range	Extended range*
ISO speed	[1 stop] (1-stop increments)	Condition set ①: 320**, 400, 800, 1600, 3200, 6400, 12800, 25600 Condition set ②: 640**, 800, 1600, 3200, 6400, 12800, 25600	Condition set ①: 200, 51200, 102400 Condition set ②: 400, 51200, 102400
	[1/3 stop] (1/3-stop increments)	Condition set ①: 320, 400, 500, 640, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000, 12800, 16000, 20000, 25600 Condition set ②: 640**, 800, 1000, 1250, 1600, 2000, 2500, 3200, 4000, 5000, 6400, 8000, 10000, 12800, 16000, 20000, 25600	Condition set ①: 200, 250, 32000, 40000, 51200, 64000, 80000, 102400 Condition set ②: 400, 500, 32000, 40000, 51200, 64000, 80000, 102400
Gain	[Normal] (3-dB increments)	Condition set ①: –2 dB**, 0 dB to 36 dB Condition set ②: 4 dB** to 36 dB	Condition set ①: –6 dB, –3 dB, 39 dB to 48 dB Condition set ②: 0 dB, 3 dB, 39 dB to 48 dB
	[Fine] (0.5-dB increments)	Condition set ①: –2 dB to 36 dB Condition set ②: 4 dB to 36 dB	Condition set ①, ②: 36.5 dB to 48 dB

* Sensitivity settings that are outside the recommended range but can still be used by setting HOME ▶ [ISO/GAIN] ❯ [OPTIONS] ❯ [Extended Range] to [On].
**Available only when the extended range is not activated.

Changing the ISO Speed or Gain Value

1 Open the ISO speed/gain [Select] submenu.

HOME screen: **HOME** ▸ [ISO/GAIN] ❯ [OPTIONS] ❯ [Select]
Monitoring menu: **EVF** ▸ [Camera Setup] (🎥) ❯ [ISO/Gain] ❯ [Select]

2 Select [ISO] or [Gain] and then press SET.

3 From the same submenu, select [ISO Increment] or [Gain Increment] to select the adjustment increment to use when adjusting the ISO speed or gain, respectively.

4 Select the desired option and then press SET.

5 HOME screen: Press the BACK button.
Monitoring menu: Press the EVF button twice to close the menu.

- The current ISO speed/gain value appears on the control display marked with an orange selection frame and also at the top of the monitoring screen.

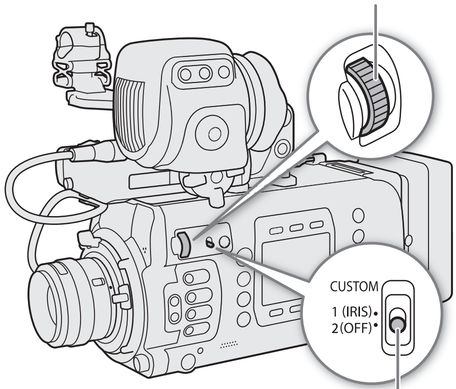
6 Set the desired ISO speed/gain value.

HOME screen: Turn the SELECT dial to select the desired value and then press SET.
Monitoring menu: Set the ISO speed/gain value using the direct setting mode (📖 73).

- The selected ISO speed/gain value appears on the HOME screen and monitoring screen.

Using the Control Dial

You can adjust the ISO speed or gain value using the control dial on the left side of the camera. The function of the control dial is determined by the position of the CUSTOM switch next to it. You can set in advance the functions that are assigned to each position of the CUSTOM switch.



1 Open the [CUSTOM Switch] submenu.

MENU/EVF ▸ [System Setup] (🔧) ❯ [CUSTOM Switch]

2 Select [1] or [2] depending on the switch position to which you want to assign the ISO speed/gain function and then press SET.

- [1] is the top position (initially assigned to the aperture function); [2] is the bottom position (initially unassigned).

3 Select [ISO/Gain] and then press SET.

4 Close the menu and set the CUSTOM switch to the position set to [ISO/Gain].

5 Turn the control dial to change the ISO speed/gain value.

ⓘ NOTES

- When high ISO speeds or gain levels are set, the image on the monitoring screen may flicker slightly.
- When high ISO speeds or gain levels are set, bright red, green or blue dots may appear on the monitoring screen. In such case, use a faster shutter speed (📖 74) or select a lower ISO speed or gain value.
- When the ISO speed or gain level is changed, some noise may appear momentarily on the monitoring screen. Do not adjust the ISO speed/gain level while recording.
- You can use the **MENU** ▸ [System Setup] ❯ [Control Dial Dir.] ❯ [Camera] setting to change the direction of the adjustment when you turn the control dial.
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the ISO speed or gain value with the remote controller's ISO/GAIN ▲/▼ buttons.

ND Filter

Using the ND filter allows you to open up the aperture to obtain a shallower depth of field even when recording in bright surroundings. You can also use the ND filter to avoid the soft focus caused by diffraction when using small apertures. By default, you can select one of 3 density levels (2 to 6 stops) and, if you enable the extended ND range, you can select one of 5 density levels (2 to 10 stops).
You can also perform this function remotely using Browser Remote on a connected network device (🕮 166, 172).

Press the ND FILTER + or – button to select the desired ND filter setting.

- Alternatively, using the HOME screen: HOME ▸ [IRIS] ❯ [ND +] and [ND –]. Or, you can press an assignable button set to [ND +] or [ND –] (🕮 127).
- Repeatedly pressing the ND FILTER + button will change the ND filter setting in the following order:
  [2 stops] → [4 stops] → [6 stops] → [8 stops]* → [10 stops]* → ND filter off.
  (The ND FILTER – button cycles through the settings in reverse order.)
- The selected ND filter setting appears on the HOME screen and at the top of the monitoring screen.

* Only when HOME ▸ [IRIS] ❯ [OPTIONS] ❯ [Extended ND Range] is set to [On].

NOTES

- Depending on the scene, the color may change when turning the ND filter on/off. Setting a custom white balance (🕮 87) may be effective in such case.
- **About the extended ND range:** When you switch to or from a density level in the extended range (8 or 10 stops), you may notice one or both of the following circumstances.
  - The focus may shift, affecting also the indication on the lens's focus distance scale.
  - Depending on the lens, the camera may not be able to focus at infinity focus.
- **About changing the ND filter setting using the optional RC-V100 Remote Controller:**
  - When the remote controller is connected to the camera, you can use the remote controller's ND button in the same way as the camera's ND FILTER + button.
  - For settings between 2 and 8 stops, the corresponding ND filter indicator (1 to 4, respectively) will illuminate in orange. When the ND filter is set to 10 stops, indicators 1 and 4 will both illuminate.

Adjusting the Aperture

You can affect the brightness of your recordings or change the depth of field by adjusting the aperture. By default, the camera is set to manual aperture but, depending on the lens used, the camera offers 3 ways to adjust the aperture. For a list of compatible lenses and functions that can be used, refer to the appendix (◻ 221).
Available aperture values will vary depending on the lens attached. You can select the adjustment increment and even use the smallest iris increment allowed by the lens.
When the optional SG-1 Shoulder Style Grip Unit is attached to the camera, you can also adjust the aperture using the grip. **C700 PL** **C700 GS PL** only: When a PL lens is attached to the camera, if you connect the 12-pin camera interface cable to the camera, you can adjust the aperture from the camera.

Manual aperture: Adjust the aperture value manually using the control dial on the camera, the camera menu, or remotely, using Browser Remote on a connected network device (◻ 166, 172).

Push auto iris: Momentary automatic aperture. During manual aperture, press an assignable button or use Browser Remote (◻ 166, 172) to temporarily adjust the aperture automatically.

Automatic aperture: The camera adjusts the aperture automatically.

Required settings on EF Cinema lenses and broadcast lenses
To adjust the aperture from the camera, you will need to enable automatic adjustment using the controls on the lens. Required settings vary depending on the lens. Refer to the following table and the instruction manual of the lens used.

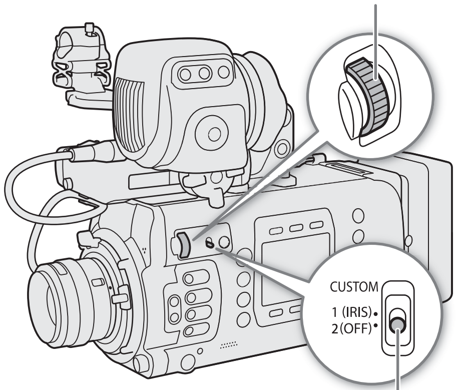
Lens	Part used on the lens	Setting for automatic adjustment
CN7x17 KAS S/E1, CN7x17 KAS S/P1, CN20x50 IAS H/E1, CN20x50 IAS H/P1, compatible broadcast lenses (◻ 221)	Iris operation change-over switch	A
CN-E18-80mm T4.4 L IS KAS S	Iris auto/manual change-over switch	AUTO

NOTES

- **When the optional SG-1 Shoulder Style Grip Unit is attached to the camera:** To adjust the aperture from the camera, set the SG-1’s IRIS (aperture control) switch to the A position. For details refer to the SG-1’s instruction manual.

Manual Aperture

With the control dial on the left side of the camera you can adjust the aperture value of a compatible lens using the smallest iris increment allowed by the lens. The function of the control dial is determined by the position of the CUSTOM switch next to it. By default, the top position is assigned to iris control but you can set in advance the functions that are assigned to each position of the CUSTOM switch.



1 Open the aperture [Mode] submenu.

HOME screen: HOME ▸ [IRIS] ❯ [OPTIONS] ❯ [Mode]
Monitoring menu: EVF ▸ [Camera Setup] (🎥) ❯ [Iris] ❯ [Mode]

- Alternatively, you can press an assignable button set to [Iris Mode] (📖 127).
- This setting is available only when an EF lens compatible with automatic aperture is attached to the camera. For non-compatible lenses, the aperture mode will be set to [Manual] and cannot be changed. Skip to step 3.

2 Select [Manual] and then press SET.

- When using a compatible EF Cinema/broadcast lens, enable automatic adjustment on the lens (📖 79).

3 From the same submenu select [Iris Increment].

4 Select [1/2 stop] or [1/3 stop] and then press SET.

- You can further select [Fine Increment] from the same submenu and set it to [On] to use the smallest iris increment allowed by the lens attached. Nevertheless, the aperture value displayed on the HOME screen and monitoring screen will be the closest value in the selected increment scale.

To use the HOME screen:

5 Press the BACK button once or press HOME ▸ [IRIS].

- The current aperture value appears on the control display marked with an orange selection frame.

6 Turn the SELECT dial to select the desired value and then press SET.

- Alternatively, you can press an assignable button set to [Iris +] or [Iris –] (📖 127).
- The selected aperture value appears on the HOME screen and at the top of the monitoring screen.

To use the control dial:

5 Close the menu and set the CUSTOM switch to the top position “1 (IRIS)”.

- The iris function is assigned to position 1 by default. If it has been changed, assign [Iris] to one of the CUSTOM switch’s positions (steps 1 to 3 selecting [Iris] instead of [ISO/Gain], 📖 77) and set the CUSTOM switch to the position set to [Iris].

6 Turn the control dial to change the aperture value.

- The selected aperture value appears on the HOME screen and at the top of the monitoring screen.

ⓘ NOTES

- You can use the MENU ▸ [System Setup] ❯ [Control Dial Dir.] ❯ [Camera] setting to change the direction of the adjustment when you turn the control dial.
- When using an EF lens with no lens contacts or most EF Cinema lenses*, you cannot adjust the aperture using the camera. Adjust the aperture using the lens.
  * Select EF Cinema lenses and broadcast lenses (📖 221) support iris adjustment from this camera.
- When using an EF lens that can correct the aperture value according to the position of the zoom, you can use the HOME ▸ [IRIS] ❯ [OPTIONS] ❯ [Zoom-Iris Correct.] setting to activate this correction.
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the aperture with the remote controller’s IRIS dial. At default settings, turn the dial right to open up the aperture and left to close the aperture.

- When using a compatible EF Cinema lens, you can change the displays to T values instead of F values with the HOME ▸ [IRIS] ❯ [OPTIONS] ❯ [Iris Indicator] setting.
- The aperture value (F value or T value) displayed on the screen may differ from the indication on the lens's aperture scale.
- When using an EF Cinema lens or broadcast lens compatible with iris adjustment from the camera, when the iris is almost fully closed, the aperture value displayed on the monitoring screen may appear in gray.
- When using an EF Cinema lens or broadcast lens compatible with iris adjustment from the camera, when you change the aperture value from a position of fully open or fully closed iris, multiple adjustment operations may be required until the aperture changes.

Momentary Automatic Aperture - Push Auto Iris

During manual aperture, you can press the PUSH AUTO IRIS button to have the camera temporarily take control and automatically adjust the aperture for an optimal exposure.
You can also perform this function remotely using Browser Remote on a connected network device (📖 166, 172).

1 Set the iris mode to [Manual] (steps 1-2, 📖 80).
  - When using a compatible EF Cinema/broadcast lens, enable automatic adjustment on the lens (📖 79).

2 Press and hold the PUSH AUTO IRIS button.
  - Alternatively, using the HOME screen: HOME ▸ [IRIS] ❯ [AUTO IRIS].
  - The camera will automatically adjust the aperture to obtain optimal exposure. As long as you hold the button pressed down, A will appear on the monitoring screen next to the aperture value.
  - When you release the button, automatic aperture mode will end and the A icon will disappear. The selected aperture value will appear on the HOME screen and at the top of the monitoring screen.

ⓘ NOTES

- You can use the HOME ▸ [IRIS] ❯ [OPTIONS] ❯ [AE Response] setting to change how quickly the aperture changes during automatic aperture mode.
- Push auto iris is not available when slow & fast motion recording is activated.

Automatic Aperture

When a compatible EF lens is attached to the camera, you can have the camera automatically adjust the aperture.

1 Open the aperture [Mode] submenu.
  HOME screen: HOME ▸ [IRIS] ❯ [OPTIONS] ❯ [Mode]
  Monitoring menu: EVF ▸ [Camera Setup] (🎥) ❯ [Iris] ❯ [Mode]
  - Alternatively, you can press an assignable button set to [Iris Mode] (📖 127).

2 Select [Automatic] and then press SET.
  - When using a compatible EF Cinema/broadcast lens, enable automatic adjustment on the lens (📖 79).
  - The camera will automatically adjust the aperture to obtain optimal exposure.
  - The selected aperture value will appear on the HOME screen and at the top of the monitoring screen with an A icon next to it.

NOTES

- Automatic aperture is not available when slow & fast motion recording is activated.
- The aperture value may change in the following cases.
  - While using the built-in extender or iris compensation function of an EF Cinema lens, when you switch from automatic aperture to manual aperture.
  - When the aperture's onscreen display is changed between T values/F values.
  - When the aperture controls on the lens are switched between automatic/manual mode.
- When using EF lenses/broadcast lenses that let you adjust the aperture gain, if the aperture gain is set too high, the aperture adjustment may not be stable (aperture hunting), depending on the shooting conditions. In such case, reset the lens's aperture gain to its initial value.

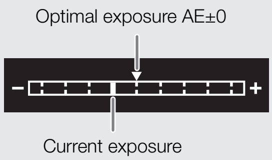
Exposure Compensation - AE Shift

Use AE shift to compensate the exposure that was set using automatic aperture, in order to darken or lighten the image.
You can also perform this function remotely using Browser Remote on a connected network device (166, 172).

1 Open the [AE Shift] submenu.
   HOME screen: HOME ▸ [IRIS] ❯ [OPTIONS] ❯ [AE Shift]
   Monitoring menu: EVF ▸ [Camera Setup] ( ) ❯ [AE] ❯ [AE Shift]

2 Select an AE shift level and then press SET.
   - Alternatively, you can press an assignable button set to [AE Shift +] or [AE Shift –] (127).
   - You can select one of 17 AE shift levels from –2.0 to +2.0.
   - The selected AE shift level will be displayed on the monitoring screen, next to the exposure bar, and the camera will attempt to adjust the exposure accordingly.

The Exposure Bar
The ▼ on top of the exposure bar indicates optimal exposure without any shift (AE±0); the scale markings indicate the deviation from optimal exposure in 1/2 EV increments. The indicator inside the exposure bar represents the current exposure. When the difference between current and optimal exposure is larger than ±2 EV, the indicator will flash at the edge of the exposure bar. Optimal exposure will change depending on the light metering mode used.



Light Metering Mode

Select the light metering mode to match the recording conditions. Using the appropriate setting will ensure that the camera obtains the most suitable exposure level when automatic aperture is used.

1 Open the [Light Metering] submenu.
   MENU/EVF ▸ [Camera Setup] ( ) ❯ [Light Metering]

2 Select the desired option and then press SET.
   - Alternatively, you can press an assignable button set to [Backlight] or [Spotlight] (127).
   - The icon of the selected mode (or , no icon for [Standard]) appears at the left of the monitoring screen.

Options

[Backlight]: Suitable when recording backlit scenes.

[Standard]: Averages the light metered from the entire screen, giving more weight to the subject in the center.

[Spotlight]: Use this option when recording a scene in which only a certain part of the picture is lit, for example, when the subject is lit by a spotlight.

Gamma Curve and Main Color Settings

The basic color management with this camera is determined by the main settings of the custom picture file: gamma curve, color space and color matrix. You can select one of the preset color settings offered by the camera or set each setting individually. For details about the custom picture file and settings, refer to *Custom Picture Settings* (□ 131).
When the main recording format is set to RAW, a special gamma curve optimized for RAW video is used, regardless of these settings.

Preset Color Settings

The camera offers the following preset color settings (combinations of gamma curve, color space and color matrix). You can also set each of the main settings individually or edit the custom picture file (□ 131) to adjust to your preference every detailed aspect of the custom picture settings (□ 134).

[Preset]*	[Gamma]*	[Color Space]*	[Color Matrix]*	Characteristics
[Canon Log 3 : C.Gamut]	[Canon Log 3]	[Cinema Gamut]	[Neutral]	These settings use Canon Log 3 gamma and presume a workflow that includes post-production processing. This gamma curve keeps the characteristics of the [Canon Log] setting while expanding its dynamic range. The color space can be selected from 4 options.
[Canon Log 3 : BT.2020]		[BT.2020 Gamut]		
[Canon Log 3 : DCI-P3]		[DCI-P3 Gamut]		
[Canon Log 3 : BT.709]		[BT.709 Gamut]		
[Canon Log 2 : C.Gamut]	[Canon Log 2]	[Cinema Gamut]	[Neutral]	These settings use Canon Log 2 gamma and presume a workflow that includes post-production processing. They achieve an even wider dynamic range than with the [Canon Log] setting and superior gradation in the shadows (dark areas of the image). The color space can be selected from 4 options.
[Canon Log 2 : BT.2020]		[BT.2020 Gamut]		
[Canon Log 2 : DCI-P3]		[DCI-P3 Gamut]		
[Canon Log 2 : BT.709]		[BT.709 Gamut]		
[Canon Log]	[Canon Log]	[BT.709 Gamut]	[Cinema EOS Original]	This setting uses Canon Log gamma and presumes a workflow that includes post-production processing. It can obtain an impressive dynamic range and color tones appropriate for post-production.
[BT.2020]	[Wide DR]	[BT.2020 Gamut]	[Neutral]	These settings produce the widest dynamic range possible without requiring post-production. The color space can be selected from 2 options.
[BT.709]		[BT.709 Gamut]		

* **HOME** ▸ [COLOR] ❯ [CP MAIN] ❯ [Preset], [Gamma], etc.

ⓘ NOTES

- **About the logarithmic gamma curves (Canon Log settings)**
  These gamma curves assume the need for post-production processing. They were designed to make the most of the imaging sensor characteristics in order to obtain impressive levels of dynamic range.
  - You can apply a LUT to video output from the camera's various terminals (□ 154) to use gamma curve/ color space settings more suitable for viewing on the optional viewfinder or an external monitor screen.
  - There are also other LUTs available that can be applied for processing in post-production. For the latest information on available LUTs, please visit your local Canon Web site.

1 **Open the custom picture file's selection screen.**

HOME screen: HOME ▸ [COLOR] ❯ [CP OTHERS] ❯ [File] ❯ [Select]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [File] ❯ [Select]

2 **Turn the SELECT dial to select the desired file and then press [OK] (HOME screen) or press SET (monitoring menu).**

- Select one of the custom picture files saved in the camera (C1 to C20). To use the settings of a custom picture file saved on an SD card, copy the file to the camera in advance (🕮 133).

3 **Open the [Preset] submenu.**

HOME screen: HOME ▸ [COLOR] ❯ [CP MAIN] ❯ [Preset]
Monitoring menu: Press the BACK button to return to the [Custom Picture] submenu and then select [Preset].

4 **Select the desired setting and then press SET.**

- To select the gamma curve, color space or color matrix individually, select [Off] and continue the procedure with step 5. To use one of the preset settings as is, the rest of the procedure is not necessary.

5 **Open the [Gamma] submenu.**

HOME screen: From the same submenu select [Gamma].
Monitoring menu: From the same submenu select [Main Settings] and then select [Gamma].

6 **Select the desired gamma curve (🕮 134) and then press SET.**

- Repeat steps 5 and 6, selecting [Color Space] to select the color space, and/or [Color Matrix] to select the color matrix in the same way.

White Balance

The camera uses an electronic white balance process to calibrate the picture and produce accurate colors under different lighting conditions. There are 4 methods of setting the white balance.
You can also perform this function remotely using Browser Remote on a connected network device (□ 166, 171).

Auto white balance (AWB): The camera automatically adjusts the white balance to the optimal level.

Custom white balance: You can use a gray card or white object with no pattern to calibrate the white balance and set it to one of two custom white balance positions, A or B. You can further adjust the color temperature value (K) and the color compensation (CC*) value.

Preset white balance: Set the white balance to ☀ (daylight) or ☀ (tungsten lamp). You can further adjust the color temperature value (K) and the color compensation (CC*) value.

User-set color temperature: The camera offers 5 white balance settings (WB1 to WB5), each of which you can set independently to a color temperature between 2,000 K and 15,000 K and further adjust the color compensation (CC*) value.

* The CC value adjusts the balance of the image along the green/magenta gradation.

NOTES

- The [Color Matrix Tuning] and [White Balance] settings in the custom picture file (□ 137) take precedence over the white balance set with these procedures.
- You can use the HOME ▸ [WB] ❯ [OPTIONS] ❯ [Shockless WB] setting to make the transition look smoother when you change the white balance settings.
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the white balance with the remote controller's AWB button, A button, B button, PRESET button and button.
- The color temperatures displayed on the control display and monitoring screen are approximate. Use them only as a reference.

Selecting the White Balance Mode/Setting

1 Open the [White Balance] screen.

HOME screen: HOME ▸ [WB]

- You can also select the white balance mode/setting using the direct setting mode (□ 73).

2 Turn the SELECT dial to select the desired white balance setting.

- The color temperature and CC value for the highlighted setting are displayed on the right side of the control display and at the top of the monitoring screen.
- Alternatively, you can press an assignable button set to [AWB AWB], [Set A], [Set B], [☀ Daylight], [☀ Tungsten] or one of the settings [WB1 USER_01] to [WB5 USER_05] (□ 127).
- To register a custom white balance, adjust the color temperature/CC value or rename a user setting, continue with the following procedures.

Auto White Balance (AWB)

The camera constantly adjusts the white balance automatically to achieve an optimal level. The camera will adjust the white balance if the light source changes.

1 Select the [AWB AWB] setting and press SET (📖 86).

- The AWB icon and the current color temperature and CC value set automatically by the camera will appear on the HOME screen and at the top of the monitoring screen.

NOTES

- Custom white balance may provide better results in the following cases:
  - Changing lighting conditions
  - Close-ups
  - Subjects in a single color (sky, sea or forest)
  - Under mercury lamps and certain types of fluorescent and LED lights
- You can use the HOME ▸ [WB] ❯ [OPTIONS] ❯ [AWB Response] setting to change how quickly the white balance changes in auto white balance (AWB) mode.
- If you set an assignable button to [AWB Lock] (📖 127), you can press the button to lock the current white balance settings set automatically by the camera. To cancel the lock, press the button again (resume auto white balance mode) or select a different white balance setting.

Registering a Custom White Balance

1 Select the [Set A] or [Set B] setting (📖 86).

- To apply the stored color temperature and CC value without changes, press SET. The rest of the procedure is not necessary.

2 HOME screen only: Press [WB SET].

3 Point the camera at a gray card or white object so that it fills the center of the monitoring screen.

- Use the same lighting conditions you plan to use when recording.

4 Press [OK] (HOME screen) or press an assignable button set to [Set White Balance] (📖 127) (monitoring screen/direct setting mode).

- The icon will flash on the control display. The A or B icon will flash quickly at the top of the monitoring screen.
- Make sure the gray card or white object fills the center of the monitoring screen until the procedure is completed.
- When the procedure is completed, the [White Balance] screen will appear on the control display and the icon will stop flashing on the monitoring screen. The color temperature and CC value registered by the camera will appear on the HOME screen and at the top of the monitoring screen, next to the A or B icon. These settings are saved even if you turn off the camera.
- If necessary, adjust the color temperature or CC value (📖 88).

NOTES

- Readjust the custom white balance if the light source changes.
- Very rarely and depending on the light source, the icon will not stop flashing. Even so, the white balance is correctly calibrated and you can continue shooting.
- After the camera registers a custom white balance the color temperature or CC value may appear in gray. This indicates that the value registered exceeds the range of values that can be displayed but the white balance is correctly calibrated and you can continue shooting.

Adjusting the Color Temperature or CC Value

1 Select a white balance setting other than [AWB AWB] (86).

2 Press [ADJUST].

- The current color temperature value and CC value appear on the control display. The color temperature will be marked with an orange selection frame.
- You can also change the color temperature and CC value using the direct setting mode (73).

3 Turn the SELECT dial to select the desired value and then press SET.

- Press [⩓] or [⩔] to skip 10 values backwards/forwards.
- Press SET or [< >] to move the selection frame between the color temperature and CC value and repeat this step to adjust the other value.
- Press [RESET] to reset the color temperature and CC value to their default settings.

4 After adjusting the white balance settings as necessary press [OK].

- The selected color temperature and CC value will appear on the HOME screen and at the top of the monitoring screen, next to the white balance icon.

Adjustment ranges

White balance mode/setting	Adjustment range	
	Color temperature (K)	Color compensation (CC) value
[☀ Daylight]	4,300 K to 8,000 K	–5 to +5
[✹ Tungsten]	2,700 K to 3,700 K	
[Set A], [Set B], [WB1 USER_01] to [WB5 USER_05]	2,000 K to 15,000 K	–20 to +20

NOTES

- If after registering a custom white balance, the color temperature and CC value appear in gray, you will not be able to adjust the color temperature or CC value.

Renaming User-Set White Balance Settings

1 Select [WB1 USER_01] to [WB5 USER_05] (86).

2 Press [RENAME].

- Enter the desired name (up to 8 characters) using the virtual keyboard (37).

Adjusting the Focus

Depending on the lens used, the camera offers several ways to focus and incorporates Dual Pixel CMOS AF technology for advanced autofocus performance. For a list of compatible lenses and functions that can be used, refer to the appendix (221). You can also adjust the focus remotely using Browser Remote on a connected network device (166, 173).

Manual focus: Turn the focus ring on the lens to adjust the focus. The camera offers several focus assistance functions (90) to help you focus more accurately when using the manual focus.

One-shot AF*: With the lens's focus mode switch set to AF, you will be able to focus manually but still have the option to press the ONE-SHOT AF button to let the camera focus automatically once on the subject inside the AF frame.

AF-Boosted MF*: Focus manually most of the way and let the camera finish focusing automatically.

Continuous AF*: The camera continuously focuses on the subject inside the AF frame. You can use the AF lock function (95) to change the composition of the picture while keeping the focus on the selected spot.

Face AF*: The camera automatically detects a person's face, focuses on it and can track it if that person moves.

Tracking*: After you select a subject, the camera keeps focusing it and tracks the subject if it moves.

* C700 only. Not available when a manual focus lens is attached to the camera.

Focusing methods and required settings

Focusing method		C700 Focus mode switch on an EF lens[1]	AF mode[2]
Manual focus	Focus ring	MF	–
		AF[3]	[One Shot]
	Browser Remote	AF	
One-shot AF	ONE-SHOT AF button	AF	[One Shot]
	Browser Remote		
AF-Boosted MF	Focus ring → Camera (automatic)	AF	[AF-Boosted MF]
	Browser Remote → Camera (automatic)		
Continuous AF	Automatic (camera or Browser Remote)	AF	[Continuous]
Face AF[4]/Tracking[5]	Camera or Browser Remote	AF	–

[1] For the necessary settings on compatible EF Cinema lenses and broadcast lenses, see the table below.
[2] ALT ▸ [AF] » [OPTIONS] » [AF Mode] setting.
[3] Depending on the lens, the focus ring may be disabled when the focus mode switch is set to AF.
[4] You can activate this mode with the ALT ▸ [AF] » [FACE] setting.
[5] You can activate this mode with the ALT ▸ [AF] » [TRACKING] setting.

Required settings on EF Cinema lenses and broadcast lenses

To adjust the focus from the camera, you will need to change the focus mode using the controls on the lens. Required settings vary depending on the lens. Refer to the following table and the instruction manual of the lens used.

Lens	Part used on the lens	Setting for automatic adjustment	Setting for manual adjustment
CN7x17 KAS S/E1, CN7x17 KAS S/P1, CN20x50 IAS H/E1, CN20x50 IAS H/P1, compatible broadcast lenses (221)	Focus operation change-over knob	SERVO	MANU.
CN-E18-80mm T4.4 L IS KAS S	Autofocus/Manual Focus change-over switch	AF	MF

Manual Focus

Focus manually using the focus ring on the lens. You can also perform this function remotely using Browser Remote on a connected network device (□ 166, 173).

The autofocus mode is set to [One Shot] by default. If you need to change the setting, start the procedure from the beginning. Otherwise, you can start from step 3 below.

1 Open the focus [AF Mode] submenu.

Setup screen: ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Mode]
Monitoring menu: EVF ▸ [Camera Setup] (▶) ❯ [Focus] ❯ [AF Mode]

2 Select [One Shot] and then press SET.

- On an EF lens, you can set the lens's focus mode switch to MF. On a compatible EF Cinema/broadcast lens, you can enable manual adjustment on the lens (□ 89).

3 Turn the focus ring to adjust the focus.

- Alternatively, open the [AF] screen (ALT ▸ ❯ [AF]) and turn the SELECT dial to adjust the focus.

NOTES

- With some EF lenses, you may be able to operate the focus ring even when the focus mode switch is set to AF.
- If you operate the zoom after focusing, the focus on the subject may be lost.
- If you focus manually and then leave the camera with the power turned on, the focus on the subject may be lost after a while. This possible slight shift in focus is a result of the internal temperature rising in the camera and lens. Check the focus before resuming shooting.
- When adjusting the focus, be careful not to touch the front of the lens or moving parts on the lens except for the focus ring.
- When an optional RC-V100 Remote Controller is connected to the camera, you can adjust the focus with the remote controller's FOCUS dial. At default settings, turn the dial right to focus farther and left to focus nearer.
- To be able to adjust the focus using an accessory connected to a lens (itself connected to the camera using the 12-pin interface cable), you will need to change the MENU ▸ [Camera Setup] ❯ [Focus Control] setting to give priority to the lens.

Using the Focus Assistance Functions

In order to focus more accurately, you can use the following focus assistance functions: Dual Pixel Focus Guide (C700 only), an onscreen guide that shows you if the picture is in focus; peaking, which creates a clearer contrast by emphasizing the outlines of the subject; and magnification, which enlarges the image on the screen. You can use peaking and the focus guide or peaking and magnification simultaneously for greater effect.

C700 Dual Pixel Focus Guide

The focus guide gives you an intuitive visual indication of the current focus distance and the direction and amount of adjustment necessary to bring the picture into full focus. When used in combination with face detection (□ 96), the guide will focus on the vicinity of the eyes of the person detected as the main subject.

1 Activate the focus guide.

Setup screen: ALT ▸ [F. ASSIST.] ❯ [GUIDE] (set it to [On])
Monitoring menu: EVF ▸ [Assist. Functions] (▨) ❯ [Focus Guide] ❯ [Activate] ❯ [On]

- Alternatively, you can press an assignable button set to [Focus Guide] (□ 127).

2 If necessary, move the focus guide frame.

Setup screen: Press [✣ FRAME] and then press [▲], [▼], [◀], [▶].
Monitoring menu: Use the joystick or SELECT dial on the optional viewfinder.

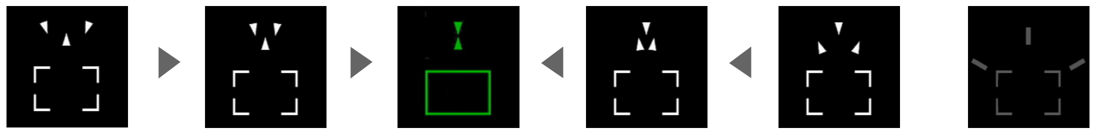
- The frame cannot be moved when tracking is activated or a face detection frame is displayed.

- Press [CENTER] (setup screen) or press the BACK button on the optional viewfinder to return the frame to the center position.

3 You can also display a second frame around a different subject.

Setup screen: From the [Focus Assistance Functions] screen in step 1, [OPTIONS] ▶ [Focus Guide] ▶ [Display 2nd Frame] ▶ [On]
Monitoring menu: From the same submenu, [Display 2nd Frame] ▶ [On]

- When the following screens are displayed on the control display, you can press SET to switch the focus guide display from one frame to the other.
  - The [AF] screen (**ALT** ▸ [AF]) and its [Move frame] screen (**ALT** ▸ [AF] ▶ [✥ FRAME])
  - The [Focus Asssistance Functions] screen (**ALT** ▸ [F. ASSIST.]) and its [Move frame] screen (**ALT** ▸ [F. ASSIST.] ▶ [✥ FRAME])



Focus farther (large adjustment) | Focus farther (small adjustment) | In focus | Focus closer (small adjustment) | Focus closer (large adjustment) | Cannot determine adjustment

NOTES

- With subjects or in situations where autofocus may not work well (📖 94), the focus guide may not work correctly.
- The focus guide cannot be used in the following cases:
  - While the focus is being adjusted automatically using one-shot AF or continuous AF.
  - When the aperture value used is F11 or larger.
  - When a manual focus lens is attached to the camera, except for compatible EF Cinema lenses (📖 221).
  - When **MENU** ▸ [Camera Setup] ▶ [Mount Adapter] is set to [MO-4E].
- When the focus guide and face detection functions are used together, the focus guide may not focus the main subject's eyes correctly, depending on the direction in which the face is turned.

Peaking

The camera offers two peaking levels.

1 Press the PEAKING button.

- Alternatively, you can press **ALT** ▸ [F. ASSIST.] ▶ [PEAKING] to turn peaking on and off. From the monitoring menu you can use the **EVF** ▸ [Assist. Functions] (![icon]) ▶ [Peaking] ▶ [VIDEO Output] and [MON.+HDMI Output] settings to turn the peaking on and off separately on the optional viewfinder or on external monitors.
- On monitors connected to one of the MON. terminals or the HDMI OUT terminal, the peaking icon (PEAK1 or PEAK2) appears at the right of the monitoring screen and the outlines in the image will be emphasized, depending on the focus.
- Press the button again to turn off peaking.

2 Open the peaking's [Select] submenu to select the peaking level.

Setup screen: **ALT** ▸ [F. ASSIST.] ▶ [OPTIONS] ▶ [Peaking] ▶ [Select]
Monitoring menu: **EVF** ▸ [Assist. Functions] (![icon]) ▶ [Peaking] ▶ [Select]

3 Select the desired level and then press SET.

Magnification

1 Press the MAGN. button.
   - Alternatively, you can press ALT ▸ [F. ASSIST.] ❯ [MAGN.] to turn the magnification on and off. From the monitoring menu you can use the EVF ▸ [Assist. Functions] ( ) ❯ [Magnification] ❯ [VIDEO Output] and [MON.+HDMI Output] settings to turn the magnification on and off separately on the optional viewfinder or on external monitors.
   - On monitors connected to one of the MON. terminals or the HDMI OUT terminal, the MAGN. appears at the top right of the monitoring screen and the center of the screen* is magnified approximately 2 times.
   - The orange frame displayed on the top right of the screen (magnification frame) shows the approximate part of the image shown magnified.

2 If necessary, move the magnification frame to check other parts of the image.
   Setup screen: ALT ▸ [F. ASSIST.] ❯ [FRAME] and then press [▲], [▼], [◀], [▶].
   Monitoring menu: Use the joystick or SELECT dial on the optional viewfinder.
   - Press [CENTER] (setup screen) or press the BACK button on the optional viewfinder to return the magnification frame to the center position.

3 Press the MAGN. button again to cancel the magnification.

* If one of the AF frames or a face detection frame is displayed on the screen, the area around the active frame will be magnified instead.

NOTES

- **About Peaking/Magnification:**
  - You can use the ALT ▸ [F. ASSIST.] ❯ [OPTIONS] ❯ [Peaking] ❯ [Peaking 1] and [Peaking 2] settings to set the color, gain and frequency of the two peaking levels independently of each other.
  - You can select individually through which terminals to output (on which monitoring devices to display) the assistance functions with the output settings under ALT ▸ [F. ASSIST.] ❯ [OPTIONS] ❯ [Peaking] and [Magnification]. When the HDMI OUT terminal's resolution is set to 4096x2160 or 3840x2160, the assistance functions will not be displayed on the monitor connected to the HDMI OUT terminal.
  - You can also use the [Focus Assist. B&W] setting under ALT ▸ [F. ASSIST.] ❯ [OPTIONS] ❯ [Peaking] and [Magnification] to display the camera's image in black & white while using the respective assistance function.
  - The assistance functions will not affect your recordings.
  - You can set ALT ▸ [F. ASSIST.] ❯ [OPTIONS] ❯ [Magnification] ❯ [Available While Rec] to [On] to be able to use magnification while recording a clip. However, in such case, you will not be able to use face detection and tracking, or display the camera's live view image on the Browser Remote screen.

C700 One-Shot AF

In this focus mode, you will focus manually in most situations but still have the option to have the camera focus automatically only once on the subject inside the AF frame that appears on the monitoring screen. You can also change the size and position of the AF frame.

1 Set the focus mode switch on the lens to AF.
   - On a compatible EF Cinema/broadcast lens, enable automatic adjustment on the lens (89).
   - AF will appear at the left of the monitoring screen.

2 Open the focus [AF Mode] submenu.
   Setup screen: ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Mode]
   Monitoring menu: EVF ▸ [Camera Setup] ( ) ❯ [Focus] ❯ [AF Mode]

3 Select [One Shot] and then press SET.

4 If necessary, change the size and position of the AF frame (95).

5 Press and hold the ONE-SHOT AF button.
- A white AF frame will appear on the monitoring screen and the camera will focus automatically. When you are using Face AF, the face detection frame around the face of the person who has been determined to be the main subject will turn white.
- When correct focus has been achieved, the AF frame turns green. If the camera cannot focus automatically, the AF frame will turn red.
- The AF frame will disappear when you release the ONE-SHOT AF button.

NOTES
- One-shot AF will not work in the following cases.
  - When slow & fast motion recording is activated.
  - When the shutter speed mode is set to [Slow] and the shutter speed is set to 1/4 or 1/3.
  - When Face AF is set to [Face Only] and a face has not been detected.
  - When a broadcast lens (□ 221) is attached to the camera.
- When the aperture value used is F11 or higher, Dual Pixel CMOS AF will not work and the camera will focus using contrast-detection autofocus.

C700 AF-Boosted MF

In this focus mode, you can focus manually most of the way and let the camera finish focusing automatically. This is very convenient when you want to make certain that your 4K recordings are in sharp focus. Additionally, with this mode, if the camera cannot evaluate how to adjust the focus, it will not perform unreliable focus adjustments. This results in an overall smoother focusing operation than with continuous AF.

1 Set the focus mode switch on the lens to AF.
- On a compatible EF Cinema/broadcast lens, enable automatic adjustment on the lens (□ 89).
- AF will appear on the left of the monitoring screen.

2 Open the focus [AF Mode] submenu.

Setup screen: ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Mode]
Monitoring menu: EVF ▸ [Camera Setup] (🎥) ❯ [Focus] ❯ [AF Mode]

3 Select [AF-Boosted MF] and then press SET.
- When the focus is in the manual adjustment range, a yellow focus frame will appear on the monitoring screen.

4 If necessary, change the size and position of the AF frame (□ 95).

5 Turn the focus ring to adjust the focus.
- Focus manually to bring the subject closer into focus. When the focus enters the automatic adjustment range, the focus frame will turn white and the camera will then finish focusing automatically.
- While the focus stays within the automatic adjustment range, the camera will keep the subject in focus automatically.

C700 Continuous AF

The camera will focus automatically on a subject inside the main area of the image (approximately 80% of the 2K or 4K recording area excluding the surrounding area, when displayed).

1 Set the focus mode switch on the lens to AF
- On a compatible EF Cinema/broadcast lens, enable automatic adjustment on the lens (□ 89).
- AF will appear on the left of the monitoring screen.

2 Open the focus [AF Mode] submenu.

Setup screen: ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Mode]
Monitoring menu: EVF ▸ [Camera Setup] (▀) ❯ [Focus] ❯ [AF Mode]

3 Select [Continuous] and then press SET.

- A white AF frame will appear on the monitoring screen. If necessary, change the size and position of the AF frame (□ 95).
- When you are using Face AF, a white detection frame will appear around the face of the person who has been determined to be the main subject.

NOTES

About the autofocus (AF) functions:

- The point where the camera focuses may change slightly depending on shooting conditions, such as subject, brightness and zoom position. Check the focus before resuming shooting.
- When the desired focus point (subject) is closer than the minimum focusing distance, the AF frame will turn red at the end of the lens's focusing range.
- Autofocus may take longer in the following cases.
  - When the frame rate set in the video configuration is set to 29.97P, 25.00P, 24.00P or 23.98P.
  - With some EF lenses, the camera may take longer to focus automatically or may not be able to focus correctly. Visit your local Canon Web site for the latest information.
- When using autofocus with compatible EF lenses, you can change various aspects of the autofocus function with the following settings. Visit your local Canon Web site for the latest information on lenses that support these settings.
  - ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Speed] to set the AF speed (the speed at which the focus is adjusted) to one of 10 levels.
  - ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Speed Limit] to select whether the selected AF speed is applied at all times or only while recording.
  - ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Response] to set the responsiveness of the autofocus function to one of 7 levels.
  - While using continuous AF, you can hold the ONE-SHOT AF button pressed down to temporarily adjust the focus using the maximum AF speed and AF response. This is helpful when you want to focus quickly after focus was lost or to keep a subject in focus while you follow it.
- Continuous AF will not work in the following cases.
  - When using an EF lens that does not have a focus mode switch.
  - While adjusting the aperture, except when using an EF lens compatible with automatic aperture (□ 221).
  - While adjusting the focus using a remote controller attached to one of the REMOTE terminals.
  - When slow & fast motion recording is activated.
  - When MENU ▸ [Camera Setup] ❯ [Mount Adapter] is set to [MO-4E].
  - When a broadcast lens (□ 221) is attached to the camera.
- Autofocus may not work well on the following subjects or in the following cases. In such case, focus manually.
  - Reflective surfaces
  - Subjects with low contrast or without vertical lines
  - Fast moving subjects
  - Through dirty or wet windows
  - Night scenes
  - Subjects with a repetitive pattern
  - When an ISO speed or gain value in the extended range is selected (□ 76).
  - When the [Gamma] setting in the custom picture file (□ 134) is set to one of the Canon Log settings or [Wide DR].
  - When using small apertures.
  - When subjects at different distances appear inside the AF frame.

AF Lock

While using continuous AF or AF-Boosted MF, you can lock the focus on a certain subject and then move the camera to change the composition.

While the autofocus is active, press ALT ▸ [AF] ❯ [AF LOCK].

- Alternatively, you can press an assignable button set to [AF Lock] (📖 127).
- The focus will be locked and AF and the AF frame on the monitoring screen will turn gray. When you are using Face AF, the face detection frame around the main subject will turn gray.
- Press [AF LOCK] again to cancel the AF lock.

ⓘ NOTES

- AF lock will be canceled automatically in the following cases:
  - If the camera is turned off or the camera's system frequency is changed.
  - If the lens is removed or replaced.
  - If the ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Mode] setting is changed to [One Shot].
  - If slow & fast motion recording is activated.

C700 Changing the AF Frame Size and Position

You can change the size and position of the AF frame that appears on the monitoring screen while using one of the autofocus functions. The size and position of face detection frames and tracking frames will change automatically as the subject moves and its relative size changes within the frame.

1 Open the [AF Frame Position] submenu.

Setup screen: ALT ▸ [AF] ❯ [OPTIONS] ❯ [AF Frame Position]
Monitoring menu: EVF ▸ [Camera Setup] (🎥) ❯ [Focus] ❯ [AF Frame Position]

2 Select the desired option and then press SET.

3 From the same submenu select [AF Frame Size].

4 Select the desired option and then press SET.

Options for [AF Frame Position]

[Selectable]: You can move the AF frame using the joystick or SELECT dial on the optional viewfinder or by pressing ALT ▸ [F. ASSIST.] ❯ [✥ FRAME] and then pressing [▲], [▼], [◀], [▶] on the camera. Press [CENTER] (setup screen) or press the BACK button on the optional viewfinder to return the AF frame to the center position.

[Center Frame]: A fixed AF frame appears at the center of the screen.

Options for [AF Frame Size]

[Large]: Standard AF frame size.

[Small]: Smaller AF frame size (about 1/3 the standard size).

C700 Face Detection

When the face detection function is activated, the camera will detect people's faces. When there are a number of people in the picture, one person will be determined to be the main subject but you have the option to select a different person as the main subject. The camera will keep tracking the main subject even when it moves.
You can use face detection with one of the autofocus functions to let the camera focus on the main subject automatically (Face AF). You can also combine face detection with the focus guide (□ 90) to help you focus on the main subject manually.

1 Activate the face detection function.
   Setup screen: ALT ▸ [AF] ❯ [FACE] (set it to [On])
   Monitoring menu: EVF ▸ [Camera Setup] (🎥) ❯ [Focus] ❯ [Face Detection] ❯ [On]
   • Alternatively, you can press an assignable button set to [Face Detection] (□ 127).
   • Press [FACE] again (setup screen) or select [Off] instead (monitoring menu) to turn off the function.

2 Open the [Face AF] submenu.
   Setup screen: From the same [AF] screen select [OPTIONS] ❯ [Face AF]
   Monitoring menu: From the same submenu select [Face AF]

3 Select the desired option and then press SET.
   • Alternatively, you can press an assignable button set to [Face AF] (□ 127).
   • ☺ or ☺ will appear at the left of the monitoring screen.

4 Point the camera at the subject.
   • A face detection frame will appear around all detected faces. The person identified as main subject will have a face detection frame with small arrows (◀▶) on the sides.
   • ☺ will appear in white when a face is detected and in gray when a face is not detected.
   • During continuous AF, the camera will keep focusing on the main subject's face. During one-shot AF, the camera will focus on the main subject's face while you hold the ONE-SHOT AF button pressed down.
   • If you use face detection together with the tracking function (□ 97), the camera will be able to track the selected main subject more reliably.

5 If necessary, change the main subject when there is more than one person detected in the frame.
   Setup screen: In the [AF] screen's or [Focus Assistance Functions] screen's [Move frame] screen (ALT ▸ [AF] or [F. ASSIST.] ❯ [✥ FRAME]), press [◀] or [▶].
   Monitoring screen: Push the joystick (left/right) or turn the SELECT dial on the optional viewfinder.

Options

[Face Priority]: When there is no face detected, the camera focuses automatically according to the AF mode currently selected.

[Face Only]: When there is no face detected, the camera locks the focus.

Face AF operation by AF mode

[AF Mode] setting and focus operation	[Face AF] setting			
	[Face Priority]		[Face Only]	
	Face detected	No face detected	Face detected	No face detected
[One Shot] while the ONE-SHOT AF button is not pressed	Manual focus			
[One Shot] while the ONE-SHOT AF button is held pressed down	Focus on the detected face	Focus on the subject inside the AF frame	Focus on the detected face	Manual focus
[Continuous] (autofocus), [AF-Boosted MF] within the automatic adjustment range				
[AF-Boosted MF] within the manual adjustment range (yellow AF frame)	Manual focus			

NOTES

- In certain cases, faces may not be detected correctly. Typical examples include:
  - Faces extremely small, large, dark or bright in relation to the frame.
  - Faces that are turned to the side, at a diagonal, partially hidden or upside-down.
- Face detection cannot be used in the following cases:
  - When the shutter speed used is slower than 1/30 (59.94 Hz recordings), 1/25 (50.00 Hz recordings) or 1/24 (24.00 Hz recordings).
  - When slow & fast motion recording is activated.
  - When the second frame of the focus guide function is displayed.
  - When MENU ▸ [Camera Setup] ❯ [Mount Adapter] is set to [MO-4E].
  - When a manual focus lens is attached to the camera.
  - When ALT ▸ [F. ASSIST.] ❯ [OPTIONS] ❯ [Magnification] ❯ [Available While Rec] is set to [On].
- The camera may mistakenly detect the faces of non-human subjects. In such case, turn face detection off.

C700 Tracking a Specific Subject

You can have the camera track other moving subjects that are not faces and also combine the tracking function with one of the autofocus functions to let the camera focus on the desired subject automatically.

1 Press ALT ▸ [AF] ❯ [TRACKING] to activate the tracking function.
- Alternatively, you can press an assignable button set to [Tracking] (🕮 127).
- The subject selection mark will appear on the monitoring screen.
- Press the BACK button to end the tracking function's standby mode.

2 Place the center of the mark on the subject you wish to track.

Setup screen: Press [▲], [▼], [◀], [▶].
Monitoring menu: Use the joystick on the optional viewfinder.
- Press [CENTER] (setup screen) or press the BACK button on the optional viewfinder to return the mark to the center position.

3 Press [START] (setup screen) or press SET on the optional viewfinder to start tracking the subject.
- If the tracking failed, the mark will turn red momentarily. Select the subject again.

4 The face detection frame or mark changes to a tracking frame and the camera will start tracking the selected subject.
- During continuous AF, the camera will keep focusing on the selected subject. During one-shot AF, the camera will focus on the selected subject while you hold the ONE-SHOT AF button pressed down.
- You can turn the SELECT dial on the camera to adjust the focus manually.
- Press [CANCEL] (setup screen) or press the BACK button on the optional viewfinder to end the tracking function and return the camera to the focus mode that was used previously.
- You can also press the assignable button set to [Tracking] to return to the tracking standby mode (subject selection screen).

NOTES

- The camera may start tracking the incorrect subject if there is another subject in the picture with similar color/pattern characteristics. In that case, select the desired subject again.
- The tracking function cannot be used in the same cases as face detection (🕮 97).

Onscreen Markers, Zebra Patterns and False Color

Using onscreen markers allows you to make sure your subject is correctly framed and is within the appropriate safe area. The zebra patterns help you identify areas that are overexposed. The false color display allows you to check if the exposure is correct. You can choose to activate these assistance displays independently on the optional viewfinder or on external monitors. The assistance displays will not affect your recordings.

Displaying Onscreen Markers

The camera offers 5 types of onscreen markers. You can display multiple onscreen markers simultaneously.

1 Open the [Markers] submenu.

MENU/EVF ▸ [Assist. Functions] ( ) ❯ [Markers]

2 Select [VIDEO Output] and/or [MON.+HDMI Output], select [On] and then press SET.

- Alternatively, you can press an assignable button set to [Markers: VIDEO] (optional viewfinder only), [Markers: MON.+HDMI] (external monitors only) or [Markers] (all monitoring devices at once) (📖 127).
- Onscreen markers are activated on all video outputs by default. Select [Off] instead to not display the onscreen markers on the respective video outputs.

3 Select a marker you wish to display, select the desired marker color and then press SET.

- Select [Off] to turn off the selected marker.
- You can display multiple markers simultaneously. Repeat this step as necessary.
- If you selected [Safe Area] or [Aspect Marker], select the desired safe area or aspect ratio with the following procedures (📖 99).

Options

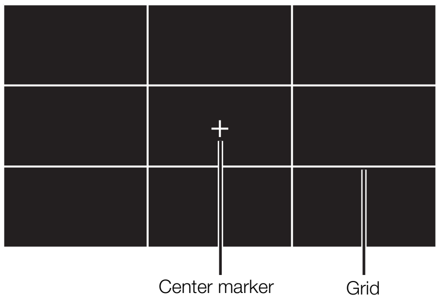
[Center]: Displays a small marker that indicates the center of the frame.

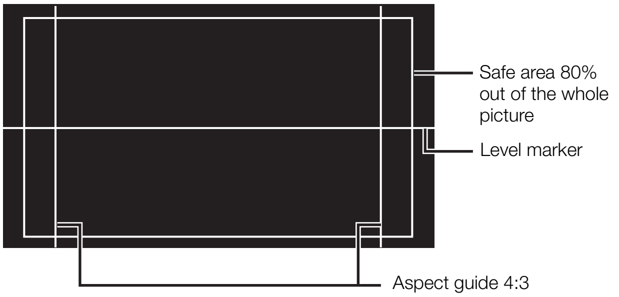
[Horizontal]: Displays a horizontal line to help you compose level shots.

[Grid]: Displays a grid that allows you to frame your shots correctly (horizontally and vertically).

[Aspect Marker]: Displays markers that indicate various aspect ratios to help you keep your shot within that area. Available options for [Aspect Ratio] are [4:3], [13:9], [14:9], [16:9], [1.375:1], [1.66:1], [1.75:1], [1.85:1], [1.90:1], [2.35:1], [2.39:1] and [Custom], a free aspect ratio set by the user.

[Safe Area] Displays indicators that show various safe areas, such as the action safe area and text safe area. You can select the core area used as the basis for calculating the safe area and a percentage ([80%], [90%], [92.5%] or [95%]), relative to that core area.





To set the aspect ratio

1 Select [Aspect Ratio], select the desired option and then press SET.
   - If you selected one of the preset aspect ratios, the rest of the procedure is not necessary. If you selected [Custom], continue the procedure to set the desired aspect ratio.

2 Select [Custom Ratio] and then press SET.

3 Set the desired aspect ratio using the keyboard screen (□ 37).

To set the safe area

If an aspect marker is not selected, the safe area will be calculated as a percentage of the whole image ([Whole Picture]) and you can only select the percentage (step 2). To calculate the safe area as a percentage of an aspect ratio marker ([Selected Aspect Marker]), select an aspect ratio marker in advance and perform the procedure from the beginning.

1 Select [Basis for Safe Area], select the desired option and then press SET.

2 Select [Safe Area %], select the desired percentage and then press SET.

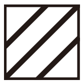
NOTES

- The aspect ratio marker will not be displayed in the following cases.
  - When the resolution for main recordings is 3840x2160 or 1920x1080 and [Aspect Ratio] is set to [16:9].
  - When the resolution for main recordings is 4096x2160 or 2048x1080 and [Aspect Ratio] is set to [1.90:1].
  - When [Aspect Ratio] is set to [Custom] and [Custom Ratio] is set to [1.90:1].

Displaying Zebra Patterns

The camera has a zebra pattern function that shows black and white diagonal stripes over areas that are overexposed. There are two types of zebra patterns and you can display both simultaneously. Zebra 1 lets you identify areas within a certain range (±5% of a specified level from 5% to 95%) while zebra 2 lets you identify areas that are over a specified level (from 0% to 100%). When you display both simultaneously and they overlap, only the zebra 1 pattern will be displayed in those areas.


Zebra 1


Zebra 2

1 Open the [Zebra] submenu.

MENU/EVF ▸ [Assist. Functions] ( ) ❯ [Zebra]

2 Select [VIDEO Output] and/or [MON.+HDMI Output], select [On] and then press SET.
   - Alternatively, you can press an assignable button set to [Zebra: VIDEO] (optional viewfinder only), [Zebra: MON.+HDMI] (external monitors only) or [Zebra] (all monitoring devices at once) (□ 127).
   - Select [Off] instead to not display the onscreen markers on the respective video outputs.

3 From the same submenu select [Select] to set the zebra pattern type.

4 Select [Zebra 1], [Zebra 2] or [Zebra 1+2] and then press SET.

5 From the same submenu select [Zebra 1 Level] or [Zebra 2 Level] to set the trigger level.

6 Select the desired value/range and then press SET.

NOTES

- When the HDMI OUT terminal's resolution is set to 4096x2160 or 3840x2160, zebra patterns will not be displayed on the monitor connected to the HDMI OUT terminal.

Using the False Color Display

The false color display is an assistance display mode that turns the image from the camera to black and white and overlays on it 6 different colors to indicate important brightness ranges.

Press the FALSE COLOR button on the camera to turn on the false color display on external monitors connected to the MON. terminals or the HDMI OUT terminal. Press the FALSE COLOR button on the optional viewfinder to turn on the false color display on the viewfinder.

- You can also set MENU/EVF ▸ [Assist. Functions] ❯ [False Color] ❯ [VIDEO Output], [MON.1 Output], [MON.2 Output] or [HDMI Output] to [On] to activate the false color display on the respective monitoring devices.
- Alternatively, you can press an assignable button set to [False Color: VIDEO] (optional viewfinder only), [False Color: MON.+HDMI] (external monitors only), [False Color: MON.1], [False Color: MON.2], [False Color: HDMI] (individual monitors) or [False Color] (all monitoring devices at once) (□ 127).

NOTES

- You can use the MENU ▸ [Assist. Functions] ❯ [False Color] ❯ [Color Index] setting to display an index of the colors used in the false color display on the control display.

Color	Meaning
Red	White clipping
Yellow	Just below white clipping
Pink	One stop over 18% gray
Green	18% gray
Blue	Just above black clipping
Purple	Black clipping

- The false color display will not be output in the following cases.
  - When the HDMI OUT terminal's resolution is set to 4096x2160 or 3840x2160, the false color display will not be displayed on the monitor connected to the HDMI OUT terminal.
  - While color bars are being displayed (□ 114).

Setting the Time Code

In shooting mode, the camera generates a time code signal and records it with the recorded clips. The time code signal can be output from the SDI OUT terminals, MON. terminals and TIME CODE IN/OUT terminal. In playback mode, the time code embedded in the clip being played back can be output from the SDI OUT terminals and MON. terminals. You can also synchronize the camera's time code with an external device (📖 106, 107).
Depending on the frame rate used, you may be able to select between a drop frame an non-drop frame time code signal (📖 102). The default mode varies depending on the country/region of purchase and, though the time code display style is different for DF and NDF, in this section the NDF display style is used for simplicity's sake.

Selecting the Time Code Mode

1 Open the time code [Mode] submenu.

Setup screen: TC ▸ [OPTIONS] ❯ [Mode]
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Time Code] ❯ [Mode]

2 Select the desired option and then press SET.

Options

[Preset]: The time code starts from an initial value you can select in advance. The default initial time code is 00:00:00.00.
See the following procedures to select the time code running mode and set the initial time code.

[Regen.]: The camera will read the selected recording media and the time code will continue from the last time code recorded on the recording media. The time code runs only while recording so clips recorded consecutively on the same recording media will have continuous time codes.

NOTES

- When the main recording format is set to [ProRes (CFast)] and a CFast card is not inserted in the camera, sub recording clips will not be recorded even if an SD card is inserted in the camera. For this reason, when the time code running mode is set to [Regen.], the last time code recorded on the SD card will not be read.

Setting the Time Code Running Mode

If you set the time code mode to [Preset], you can select the time code running mode.

1 Open the time code [Run] submenu.

Setup screen: TC ▸ [OPTIONS] ❯ [Run]
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Time Code] ❯ [Run]

2 Select the desired option and then press SET.

Options

[Rec Run]: The time code runs only while recording so clips recorded consecutively on the same recording media will have continuous time codes.

[Free Run]: The time code starts running the moment you press SET and keeps running regardless of the camera's operation.

Setting the Time Code's Initial Value

If you set the time code mode to [Preset], you can set the initial value of the time code.

1 Open the time code setting screen.
   Setup screen: TC ▸ [SET TC]
   Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Time Code] ❯ [Setting] ❯ [Set]*
   * To reset the time code to [00:00:00.00], select [Reset] instead.
   - The time code setting screen appears with an orange selection frame indicating the hours.
2 Set the desired time code using the keyboard screen (📖 37).
   - Camera menu only: Press [RESET] to reset the time code to [00:00:00.00].
   - If the running mode is set to [Free Run], the time code will start running from the selected time code the moment you confirm the time code.

Selecting Drop or Non-Drop Frame

When the frame rate is set to 29.97P, 59.94i, or 59.94P, you can select between a drop frame (DF) or non-drop frame (NDF) time code, depending on how you plan to use your recordings.
With all other frame rates, the time code is set to non-drop frame (NDF) and cannot be changed.

1 Open the [DF/NDF] submenu.
   Setup screen: TC ▸ [OPTIONS] ❯ [DF/NDF]
   Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Time Code] ❯ [DF/NDF]
2 Select [DF] or [NDF] and then press SET.
   - The time code display will differ depending on the setting. When you select [DF], the time code will appear as [00:00:00.00]; when you select [NDF], it will appear as [00:00:00:00].

Putting the Time Code Display on Hold

If you set an assignable button to [Time Code Hold] (📖 127), you can press the button to freeze the display of the time code*. While the time code display is put on hold, [H] will appear next to the time code on the HOME screen and at the bottom right corner of the monitoring screen.
The time code continues to run normally while the time code display is on hold. When you resume the time code display, the current time code will be displayed.

* The time code signal output from the SDI OUT terminals, MON. terminals and TIME CODE IN/OUT terminal will not be put on hold. However, the time code displayed on a monitor connected to the HDMI OUT terminal will be put on hold.

About the Time Code Display

A letter may appear next to the time code depending on the operation. Refer to the following table.

Letter	Description
R	The time code mode is set to [Regen.].
P	The time code mode is set to [Preset] and the running mode is set to [Rec Run].
F	The time code mode is set to [Preset] and the running mode is set to [Free Run].
E	Time code signal is coming from an external source.
H	Time code display is on hold.
None	Time code during clip playback.

NOTES

- The frames value of the time code runs from 0 to 23 (frame rate set to 23.98P or 24.00P), from 0 to 24 (frame rate set to 25.00P, 50.00i or 50.00P), or from 0 to 29 (all other frame rates).
- When you mix drop frame and non-drop frame time codes, there might be a discontinuity in the time code at the point where the recording starts.
- When you are using the [Free Run] running mode, the time code will continue running as long as the lithium button battery has some charge left, even if you disconnect all other power sources.
- If you set an assignable button to [Time Code] (🕮 127), you can press the button to open the [Time Code] submenu in the monitoring menu.

Setting the User Bit

The user bit display can be selected from the date or the time of recording, or an identification code consisting of 8 characters in the hexadecimal system. There are sixteen possible characters: the numbers 0 to 9 and the letters A to F.
If user bit information is being received along with an external time code, you can also record the external user bit with XF-AVC clips (🕮 106).

1 Open the user bit setting screen.

Setup screen: TC ▸ [UB] ❯ [SET UB]
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [User Bit] ❯ [Type] ❯ [Setting] ❯ [Set]*

* To reset the user bit to [00 00 00 00], select [Reset] instead.

- The user bit setting screen appears with an orange selection frame on the leftmost character.

2 Set the desired user bit using the keyboard screen (🕮 37).

- Setup screen only: Press [RESET] to reset the user bit to [00 00 00 00].

To use the date or time as user bit

1 Open the user bit [Type] submenu.

Setup screen: TC ▸ [UB] ❯ [OPTIONS] ❯ [Type]
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [User Bit] ❯ [Type]

2 Select [Time] or [Date] and then press SET.

Synchronizing with an External Device

Using Genlock synchronization, you can synchronize this camera's video signal to that of an external video device. Similarly, using an external time code signal, you can synchronize this camera's time code to the external signal. Using the external time code signal with multiple cameras allows you to set up a multi-camera recording. You can also output the time code signal from this camera to achieve the same result. If you output the time code from the SDI OUT terminals or MON. terminals to an editing device, the editor can create video with the same time code.

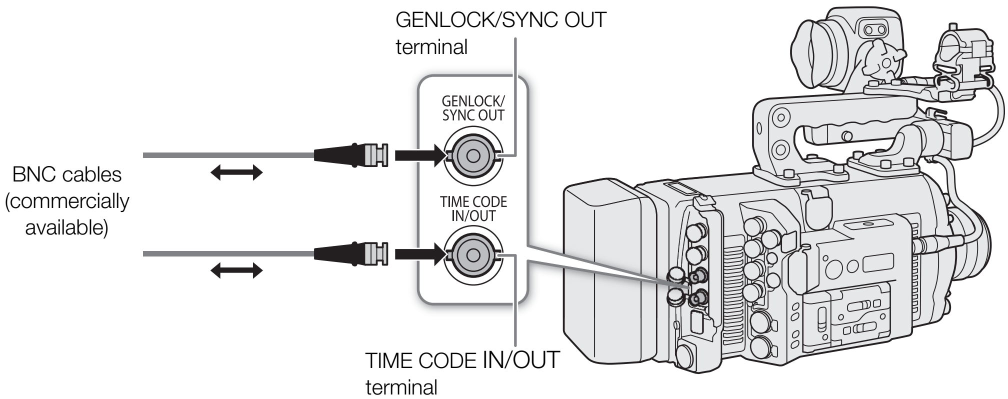
Connecting an External Device

When synchronizing the camera using a reference video signal*, use the GENLOCK/SYNC OUT terminal. When synchronizing a time code signal, use the TIME CODE terminal. Be sure to set either terminal to input or output in advance.

Connect the external device to the camera as shown in the following diagram.

* As reference video signal (input signal) for Genlock synchronization, you can use an analog blackburst or tri-level HD signal. The reference video output signal will be a tri-level HD signal.

Connection Diagram



Reference Video Signal Input (Genlock Synchronization)

When a reference sync signal (tri-level HD signal or analog blackburst) is input through the GENLOCK/SYNC OUT terminal, the phases of the camera's V and H sync will automatically be synchronized to it. The phase difference between the external Genlock signal and the camera is initially set to 0. The H phase can be adjusted within the range of approximately ±0.4 H.

1 **Open the GENLOCK/SYNC OUT terminal's [Terminal Function] submenu.**

   MENU/EVF ▸ [System Setup] (🔧) ❯ [GENLOCK/SYNC OUT] ❯ [Terminal Function]

2 **Select [Genlock Input] and then press SET.**

3 **From the same submenu select [Genlock Adjustment].**

4 **Set the desired H phase adjustment value using the keyboard screen (📖 37).**

   - Camera menu only: Press [RESET] to reset the H phase adjustment value to [000].

ⓘ NOTES

- When a suitable Genlock signal is input, the Genlock synchronization stabilizes after approximately 10 seconds.
- When a suitable Genlock signal is detected, the Gen. icon will flash on the HOME screen and at the bottom right corner of the monitoring screen. When the camera locks on the external Genlock signal, the icon will stay on.
- If the external Genlock signal is incorrect, the synchronization may not be stable. In such case, the recorded time code may be incorrect.

Time Code Signal Input

An external SMPTE-standard LTC timing signal received from the TIME CODE IN/OUT terminal can be recorded as the time code. The user bit of the external timing signal can also be recorded with clips. Before connecting the device, set the TIME CODE IN/OUT terminal to input with the procedure below and make sure the time code running mode is set to [Free Run] (📖 101).

1 **Open the [TC In/Out] submenu.**

   Setup screen: TC ▸ [OPTIONS] ❯ [TC In/Out]
   Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Time Code] ❯ [TC In/Out]

2 **Select [In] and then press SET.**

Recording the User Bit of an External Signal

The user bit of an external time code signal can also be recorded with clips, along with the time code itself.

1 Open the user bit [Recording Mode] submenu.

   Setup screen: TC ▸ [UB] ❯ [OPTIONS] ❯ [Recording Mode]
   Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [User Bit] ❯ [Recording Mode]

2 Select [External] and then press SET.

ⓘ NOTES

- Synchronize the camera's time code with an external time code signal that matches the camera's system frequency. Use a 24-frame time code signal when the frame rate is set to 23.98P or 24.00P, a 25-frame time code signal when it is set to 25.00P, 50.00i or 50.00P and a 30-frame time code signal for other frame rates.
- When a suitable external time code signal is received, the camera's own time code will be synchronized to it and the synchronization will be maintained even if you disconnect the cable from the TIME CODE IN/OUT terminal.

- When the camera locks on an external time code signal, [E] will appear next to the time code on the control display and at the bottom right corner of the monitoring screen.
- If the external time code signal is incorrect or there is no input signal, the internal time code set in the camera will be recorded instead.
- While a DF time code signal is being received, the external time code's drop-frame bit will be used.
- Performing any of the following actions while the cable is not connected will cause the synchronization to be disrupted; the correct time code will be restored once you reconnect the cable.
  - Turning the camera off or pressing the PLAY button (switching to playback mode)
  - Changing the video configuration

Reference Video Signal Output

You can output the camera's video signal as a reference sync signal (tri-level HD signal) to synchronize an external device to this camera. The reference video signal output will have the same frequency as the signal output from the SDI OUT terminals.

1 Open the GENLOCK/SYNC OUT terminal's [Terminal Function] submenu.

MENU/EVF ▸ [System Setup] (🔧) ❯ [GENLOCK/SYNC OUT] ❯ [Terminal Function]

2 Select [HD Sync Output] and then press SET.

- If necessary, change the scan mode (P or PsF) with the [SYNC Scan Mode] setting in the same submenu.

Synchronization signals

Video output from the SDI OUT terminals		Signal output from the SYNC OUT terminal (tri-level HD signal)
Resolution	Frame rate	
4096x2160 3840x2160 2048x1080 1920x1080	29.97P	1080/29.97 (P/PsF)
	25.00P	1080/25.00 (P/PsF)
	24.00P	1080/24.00 (P/PsF)*
	23.98P	1080/23.98 (P/PsF)
4096x2160 3840x2160 2048x1080 1920x1080	59.94i / 59.94P	1080/59.94i
	50.00i / 50.00P	1080/50.00i

* When slow & fast motion recording is activated, the signal output will change depending on the system frequency used: 1080/59.94i (59.94 Hz), 1080/50.00i (50.00 Hz) or 1080/60.00i (24.00 Hz). When slow & fast motion recording is activated in crop mode ([On (crop)]), the signal output will always be 1080/60.00i.

Time Code Signal Output

The time code will be output from the TIME CODE IN/OUT terminal as a SMPTE-standard LTC timing signal. The user bit will also be output. Additionally, the time code will be output from the SDI OUT terminals and MON. terminals.

Before connecting the external device, set TC ▸ [OPTIONS] ❯ [TC In/Out] to [Out] to change the TIME CODE terminal's function to output (📖 106).

ⓘ NOTES

- The time code will not be output when slow & fast motion recording is activated or during playback.

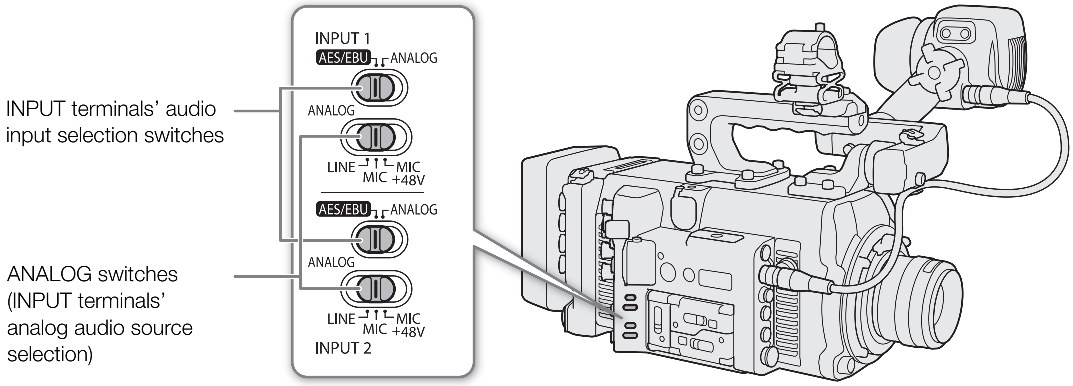
Recording Audio

The camera features 4-channel linear PCM (24 bit, 48 kHz) audio recording and playback. You can record audio using the INPUT terminals (commercially available microphones, analog line-in audio sources, AES/EBU digital audio sources), the MIC terminal (commercially available microphones) or the built-in monaural microphone*. The audio signal will be output with the video signal from the SDI OUT terminals, MON. terminals and HDMI OUT terminal. You can record this audio signal on an external recorder.

* Only for recording notes while shooting.

Audio Settings and Recorded Audio Channels

Which audio inputs are recorded to which audio channels is determined by a combination of menu settings and audio-related controls on the camera.
The following table gives an overview of the possible combinations.



[CH1/2 IN]*	[CH3/4 IN]*	Audio input selection switches		[CH2 Input]**	Recorded audio channels/audio sources			
		for INPUT 1	for INPUT 2		CH1	CH2	CH3	CH4
[INPUT Terminals]	[MIC Terminal]	AES/EBU	–	–	INPUT 1 terminal (digital audio)		MIC terminal (L)	MIC terminal (R)
[INPUT Terminals]	[INPUT Terminals]	AES/EBU	AES/EBU	–	INPUT 1 terminal (digital audio)		INPUT 2 terminal (digital audio)	
[INPUT Terminals]	[INPUT Terminals]	AES/EBU	ANALOG	–	INPUT 1 terminal (digital audio)		–	INPUT 2 terminal
[INPUT Terminals]	[Monaural Mic]	AES/EBU	–	–	INPUT 1 terminal (digital audio)		Built-in microphone (mono)	Built-in microphone (mono)
[INPUT Terminals]	[MIC Terminal]	ANALOG	–	[INPUT 2]	INPUT 1 terminal	INPUT 2 terminal	MIC terminal (L)	MIC terminal (R)
[INPUT Terminals]	[MIC Terminal]	ANALOG	–	[INPUT 1]	INPUT 1 terminal	INPUT 1 terminal	MIC terminal (L)	MIC terminal (R)
[INPUT Terminals]	[INPUT Terminals]	ANALOG	AES/EBU	[INPUT 1]	INPUT 1 terminal	INPUT 1 terminal	INPUT 2 terminal (digital audio)	
[INPUT Terminals]	[INPUT Terminals]	ANALOG	AES/EBU	[INPUT 2]	INPUT 1 terminal	–	INPUT 2 terminal (digital audio)	
[INPUT Terminals]	[INPUT Terminals]	ANALOG	ANALOG	[INPUT 2]	INPUT 1 terminal	INPUT 2 terminal	INPUT 1 terminal	INPUT 2 terminal
[INPUT Terminals]	[INPUT Terminals]	ANALOG	ANALOG	[INPUT 1]	INPUT 1 terminal	INPUT 1 terminal	INPUT 1 terminal	INPUT 2 terminal

[CH1/2 IN]*	[CH3/4 IN]*	Audio input selection switches		[CH2 Input]**	Recorded audio channels/audio sources			
		for INPUT 1	for INPUT 2		CH1	CH2	CH3	CH4
[INPUT Terminals]	[Monaural Mic]	ANALOG	–	[INPUT 2]	INPUT 1 terminal	INPUT 2 terminal	Built-in microphone (mono)	Built-in microphone (mono)
[INPUT Terminals]	[Monaural Mic]	ANALOG	–	[INPUT 1]	INPUT 1 terminal	INPUT 1 terminal	Built-in microphone (mono)	Built-in microphone (mono)
[MIC Terminal]	[INPUT Terminals]	–	ANALOG	–	MIC terminal (L)	MIC terminal (R)	INPUT 1 terminal	INPUT 2 terminal
[MIC Terminal]	[INPUT Terminals]	–	AES/EBU	–	MIC terminal (L)	MIC terminal (R)	INPUT 2 terminal (digital audio)	
[MIC Terminal]	[MIC Terminal]	–	–	–	MIC terminal (L)	MIC terminal (R)	MIC terminal (L)	MIC terminal (R)
[MIC Terminal]	[Monaural Mic]	–	–	–	MIC terminal (L)	MIC terminal (R)	Built-in microphone (mono)	Built-in microphone (mono)
[Monaural Mic]	[INPUT Terminals]	–	ANALOG	–	Built-in microphone (mono)	Built-in microphone (mono)	INPUT 1 terminal	INPUT 2 terminal
[Monaural Mic]	[MIC Terminal]	–	–	–	Built-in microphone (mono)	Built-in microphone (mono)	MIC terminal (L)	MIC terminal (R)
[Monaural Mic]	[INPUT Terminals]	–	AES/EBU	–	Built-in microphone (mono)	Built-in microphone (mono)	INPUT 2 terminal (digital audio)	
[Monaural Mic]	[Monaural Mic]	–	–	–	Built-in microphone (mono)	Built-in microphone (mono)	Built-in microphone (mono)	Built-in microphone (mono)

* ALT ▸ [AUDIO] ❯ [CH1/2 IN] and [CH3/4 IN] settings.
** ALT ▸ [AUDIO] ❯ [OPTIONS] ❯ [Audio Input] ❯ [CH2 Input] setting.

NOTES

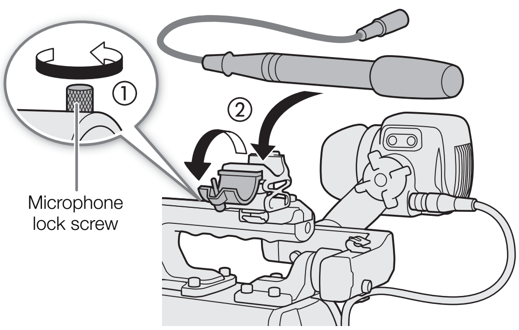
- On the ALT ▸ [AUDIO] screen, you can check the audio input source, audio level adjustment mode (A – automatic/M – manual) and audio level indicator for each of the audio channels.

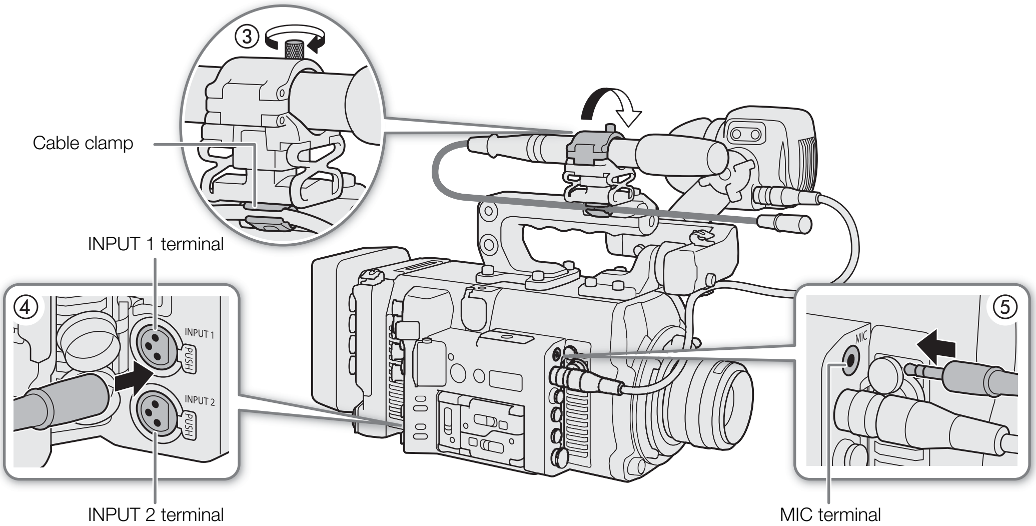
Connecting an External Microphone or External Audio Input Source to the Camera

To each of the INPUT terminals you can attach commercially available microphones, digital audio sources (AES/EBU), or analog line in sources with an XLR connector. To the MIC terminal you can attach commercially available condenser microphones with their own power supply, and a Ø 3.5 mm stereo mini plug.
Using the supplied microphone holder, you can fix external microphones with a diameter of 19 mm to 24 mm.

Follow the procedure below to attach a microphone (refer also to the following illustration). To connect an external audio device to the camera, plug the device's cable into the desired INPUT terminal (④). The following procedure and illustrations assume that the supplied microphone holder is attached to the camera (📖 43).

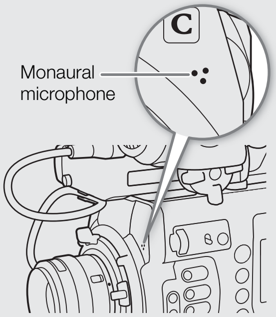
1 Loosen the microphone lock screw (①), open the microphone holder and insert the microphone (②).
2 Tighten the lock screw and put the microphone cable through the cable clamp under the microphone holder (③).
3 Plug the microphone cable into the desired INPUT terminal (④) or the MIC terminal (⑤).





About the monaural microphone

The monaural microphone allows you to add comments while shooting, which can be synchronized to the audio and video during editing.



NOTES

- The audio recording level of the monaural microphone is adjusted automatically and cannot be changed.

Setting the Audio Input Type for the INPUT 1/INPUT 2 Terminals

Using the INPUT 1/INPUT 2 terminals, you can record audio independently to two audio channels from a microphone or audio input source.

On the camera, set the audio-related switches for the INPUT terminal you wish to use according to the type of audio input you wish to use.

1 Set the audio input selection switch for the desired INPUT terminal to AES/EBU (digital audio) or ANALOG (analog audio).

2 If you selected analog audio, set the INPUT terminal's ANALOG (analog source selection) switch to MIC (microphone) or LINE (audio device).

- To supply a microphone with phantom power, set the switch to MIC+48V instead. Make sure to connect the microphone first, before turning the phantom power on. Keep the microphone connected when turning off the phantom power.
- When using the INPUT terminals to record to only one channel, use the INPUT 1 terminal.

IMPORTANT

- When connecting an analog microphone or device that does not support phantom power, make sure to set the corresponding INPUT switch to MIC or LINE, respectively. If you set the switch to MIC+48V, the microphone or device may be damaged.

Selecting the Audio Input Source for Audio Channels

You can select the audio input source that will be recorded on CH1/CH2 or CH3/CH4, independently for each pair of audio channels. For details refer to the *Audio Settings and Recorded Audio Channels* table (108).

1 Select the desired pair of audio channels.

Setup screen: ALT ▸ [AUDIO] ➤ [CH1/2 IN] or [CH3/4 IN]
Monitoring menu: EVF ▸ [Audio Setup] (♪)) ➤ [Audio Input] ➤ [Select CH1/2 Input] or [Select CH3/4 Input]

2 Select [INPUT Terminals] (external microphone or audio device), [MIC Terminal] (external microphone) or [Monaural Mic] (built-in microphone) and then press SET.

- If necessary, repeat steps 1 and 2 to select the audio input source for the other pair of audio channels.

Recording a Single Analog Audio Input to Two Audio Channels

By default, when using analog audio sources (line in or microphone) connected to the INPUT terminals, each audio input is recorded to a separate audio channel (INPUT 1 to CH1 and INPUT 2 to CH2).
If necessary (for example, as an audio backup recording), you can record the same analog audio source connected to the INPUT 1 terminal to both audio channels, CH1 and CH2. In that case, you can adjust the audio recording levels of each channel independently of each other.

1 Open the [CH2 Input] submenu.

Setup screen: ALT ▸ [AUDIO] ➤ [OPTIONS] ➤ [Audio Input] ➤ [CH2 Input]
Monitoring menu: EVF ▸ [Audio Setup] (♪)) ➤ [Audio Input] ➤ [CH2 Input]

2 Select the desired option and then press SET.

Options

[INPUT 2]: Records audio to each channel separately. Analog audio input into INPUT 1 is recorded to CH1, while audio input into INPUT 2 is recorded to CH2.

[INPUT 1]: Analog audio input into INPUT 1 is recorded to both channels. Audio input into INPUT 2 will not be recorded.

Adjusting the Audio Recording Level

When a channel is set to an analog audio input, you can select the automatic audio recording level adjustment or adjust the audio level manually, independently for each channel. When a channel is set to a digital audio source or the built-in monaural microphone, the audio recording level cannot be adjusted.
Repeat the following procedure as necessary to adjust the audio recording level for the audio channels used.

1 Open the [Audio Rec Level] screen/submenu of the desired audio channel.

Setup screen: ALT ▸ [AUDIO] ➤[REC LEVEL] ➤ Desired audio channel(s) ([CH1] to [CH4], [CH1/2], [CH3/4])
Monitoring menu: EVF ▸ [Audio Setup] (♪)) ➤ [Audio Input] ➤ [Audio Rec Level CH1] to [Audio Rec Level CH4], [Audio Rec Level CH1/2] or [Audio Rec Level CH3/4]

2 **Select automatic or manual audio level adjustment.**

Setup screen: Press [A⇔M] to switch between A (automatic) and M (manual) adjustment mode.
Monitoring menu: Select [Automatic] or [Manual] and then press SET.

- If you selected automatic audio level, the rest of the procedure is not necessary.
- If you selected manual audio level, continue the procedure to adjust the audio recording level. On the control display the current audio level will be marked with an orange selection frame.

3 **Monitoring menu only: From the same submenu select [CH1 Level] to [CH4 Level], [CH1/2 Level] or [CH3/4 Level] according to the audio channel selected in step 1.**

4 **Turn the SELECT dial to set the audio recording level and then press SET.**

- For reference, 0 corresponds to –∞, 50 corresponds to 0 dB, and 100 corresponds to +18 dB.
- As a guideline, adjust the audio recording level so that the audio level meter will go to the right of the –18 dB mark (one mark right of the –20 dB mark) only occasionally.

NOTES

- When both CH1 and CH2, or CH3 and CH4, are set to the INPUT terminals and to the same type of analog audio source (external microphone or external line input), if both channels are also set to automatic audio level adjustment, you can use the ALT ▸ [AUDIO] ❯ [OPTIONS] ❯ [Audio Input] ❯ [CH1/CH2 ALC Link] and [CH3/CH4 ALC Link] settings to link the audio level adjustment of both channels.
- If at least one of the channels is set to the INPUT terminals, an analog audio source and manual audio level adjustment, you can activate the audio limiter to prevent audio distortions. When activated, the audio limiter will limit the amplitude of audio input signals when they start to distort. Use the ALT ▸ [AUDIO] ❯ [OPTIONS] ❯ [Audio Input] ❯ [INPUT 1&2 Limiter] setting.
- We recommend using headphones when adjusting the audio level. If the input level is too high, audio may become distorted even if the audio level indicator shows an appropriate level.
- If you set an assignable button to [Audio Lvl Indicator] (📖 127), you can press the button to turn on and off the audio level indicator that appears at the right of the monitoring screen.

Additional Settings for External Analog Microphones

Microphone Sensitivity (INPUT Terminals)

When the audio input selection switch for INPUT 1 or INPUT 2 is set to ANALOG and the corresponding ANALOG (analog source selection) switch is set to MIC or MIC+48V, you can select the external microphone's sensitivity.

1 Open the desired INPUT terminal's sensitivity submenu.

Setup screen: ALT ▸ [AUDIO] ❯ [OPTIONS] ❯ [Audio Input] ❯ [INPUT 1 Mic Trim] or [INPUT 2 Mic Trim]
Monitoring menu: EVF ▸ [Audio Setup] (♪)) ❯ [Audio Input] ❯ [INPUT 1 Mic Trim] or [INPUT 2 Mic Trim]

2 Select the desired level and then press SET.

- You can select one of 5 sensitivity levels from –12 dB to +12 dB.

Microphone Attenuator (INPUT Terminals)

When the audio input selection switch for INPUT 1 or INPUT 2 is set to ANALOG and the corresponding ANALOG (analog source selection) switch is set to MIC or MIC+48V, you can activate the external microphone's attenuator (20 dB).

1 Open the desired INPUT terminal's microphone attenuator submenu.
   Setup screen: **ALT** ▸ [AUDIO] ➤ [OPTIONS] ➤ [Audio Input] ➤ [INPUT 1 Mic Att.] or [INPUT 2 Mic Att.]
   Monitoring menu: **EVF** ▸ [Audio Setup] (♪)) ➤ [Audio Input] ➤ [INPUT 1 Mic Att.] or [INPUT 2 Mic Att.]
2 Select [On] and then press SET.

Low Cut Filter (MIC Terminal)

When an audio channel is set to the MIC terminal, you can activate the low-cut filter, for example to reduce the sound of wind in the background when recording outdoors.

1 Open the [MIC Low Cut] submenu.
   Setup screen: **ALT** ▸ [AUDIO] ➤ [OPTIONS] ➤ [Audio Input] ➤ [MIC Low Cut]
   Monitoring menu: **EVF** ▸ [Audio Setup] (♪)) ➤ [Audio Input] ➤ [MIC Low Cut]
2 Select [On] and then press SET.
   - When you select [On], some low-frequency sounds may be suppressed along with the sound of wind.

Microphone Attenuator (MIC Terminal)

When an audio channel is set to the MIC terminal, if the audio level is too high and the sound sounds distorted, you can activate the microphone attenuator (20 dB).

1 Open the [MIC Att.] submenu.
   Setup screen: **ALT** ▸ [AUDIO] ➤ [OPTIONS] ➤ [Audio Input] ➤ [MIC Att.]
   Monitoring menu: **EVF** ▸ [Audio Setup] (♪)) ➤ [Audio Input] ➤ [MIC Att.]
2 Select [On] and then press SET.

Monitoring the Audio with Headphones

Connect headphones with a ∅ 3.5 mm stereo mini-plug to the 🎧 (headphone) terminal to monitor the recorded audio.

ⓘ NOTES

- You can adjust the headphone volume using the **ALT** ▸ [AUDIO] ➤ [🎧] setting (in shooting mode) or **PLAY**▸ **MENU** ▸ ➤ [Audio Setup] ➤ [Headphone Volume] setting (in playback mode).
- If you set an assignable button to [Headphones +] or [Headphones –] (📖 127), you can press the button to adjust the headphone volume without using the menu.

Colors Bars/Audio Reference Signal

You can have the camera generate color bars and a 1 kHz audio reference signal and output them from the VIDEO terminal (optional viewfinder, color bars only), SDI OUT terminals, MON. terminals, HDMI OUT terminal and 🎧 (headphone) terminal (audio reference signal only). If the main recording format is set to [XF-AVC (CFast)], the color bars and audio reference signal are recorded on clips recorded on a CFast card or SD card.

Color Bars

The camera offers 3 types of color bars (SMPTE, EBU or ARIB).

1 **Open the [Activate] submenu to activate the color bars.**

MENU/EVF ▸ [Camera Setup] (📽) ❯ [Color Bars] ❯ [Activate]

- Alternatively, you can press an assignable button set to [Color Bars] (📖 127).

2 **Select [On] and then press SET.**

- The selected color bars appear on the monitoring screen.

3 **From the same submenu select [Type] and then press SET.**

4 **Select the type of color bars and then press SET.**

- Turning off the camera or pressing the PLAY button (switching to playback mode) will deactivate the color bars.

ⓘ NOTES

- When the main recording format is set to one of the ProRes or RAW options, color bars will not be displayed or output.

Audio Reference Signal

The camera can output a 1 kHz audio reference signal with the color bars.

1 **Open the [1 kHz Tone] submenu.**

Setup screen: ALT ▸ [AUDIO] ❯ [OPTIONS] ❯ [Audio Input] ❯ [1 kHz Tone]
Monitoring menu: EVF ▸ [Audio Setup] (♪)) ❯ [Audio Input] ❯ [1 kHz Tone]

2 **Select the desired level (–12 dB, –18 dB or –20 dB) and then press SET.**

- Select [Off] to turn off the signal.

Waveform Monitor

The camera can display a simplified waveform monitor on the monitoring screen. You can select one of 6 types of monitors and also adjust the waveform amplification.

Displaying the Waveform Monitor

Press the WFM button.

- The waveform monitor window will appear at the right of the monitoring screen on external monitors connected to one of the MON. terminals or the HDMI OUT terminal.
- You can also set MENU/EVF ▸ [Assist. Functions] ❯ [Waveform Monitor] ❯ [VIDEO Output] and/or [MON.+HDMI Output] to [On] to display the waveform monitor on the respective monitoring devices.
- Alternatively, you can press an assignable button set to [WFM: VIDEO] (optional viewfinder only), [WFM: MON.+HDMI] (external monitors only), or [Waveform Monitor] (all monitoring devices at once) (🕮 127).

Configuring the Waveform Monitor

1 Open the waveform monitor's [Type] submenu.

MENU/EVF ▸ [Assist. Functions] (🖼) ❯ [Waveform Monitor] ❯ [Type]

2 Select the desired option and then press SET.

- If you selected [Select Line], continue the procedure to set the Y coordinate of the line you wish to display. Otherwise, skip to step 5 to change the gain.

3 From the same submenu, select [Select Line] and then press SET.

4 Enter the Y coordinate of the desired line using the keyboard screen (🕮 37).

- When the vertical resolution (number of horizontal lines) is 1080, you can select a value between 0 and 1079 (1-line increments); when the vertical resolution is 2160, you can select a value between 0 and 2158 (2-line increments).

5 From the same submenu select [Gain] and then press SET.

6 Select the desired amplification ratio and then press SET.

- If you selected [1x], the rest of the procedure is not necessary. If you selected [2x], the display range of the waveform monitor's Y axis will be reduced by half. Continue the procedure to select the minimum luminance value (in %) shown on the Y axis.

7 From the same submenu select [Y Position] and then press SET.

8 Select the desired percentage and then press SET.

Options

[Line]:	Sets the waveform monitor to line display mode.
[Line+Spot]:	The waveform of the area in the red frame is displayed in red on top of the [Line] mode waveform.
[Select Line]:	The selected horizontal line will be displayed along with its waveform.
[Field]:	Sets the waveform monitor to field display mode.
[RGB]:	Functions like an RGB parade scope.
[YPbPr]:	Functions like a YPbPr parade scope.

NOTES

- The waveform monitor will not be affected even if a LUT is applied to the video output.
- The waveform monitor cannot be displayed while magnification is activated.
- If the [Knee] settings in the custom picture file (🕮 135) were changed, a horizontal line will appear on the waveform monitor indicating the luminance (Y) level corresponding to the knee point.

Adding an OK Mark or ✓ Mark while Recording

After making an important recording, you can add an OK mark (OK) or check mark (✓) to the clip (XF-AVC clips on the CFast card only) to flag it and set it apart. You can use the OK mark to protect important clips, as clips with an OK mark cannot be deleted using the camera.
To add an OK mark or ✓ mark to a clip, you must first set in advance an assignable button to [Add OK Mark] or [Add ✓ Mark].

1 Set an assignable button to [Add OK Mark] or [Add ✓ Mark] (📖 127).
   - To add both types of clip marks (to different clips), set one assignable button to [Add OK Mark] and another assignable button to [Add ✓ Mark].

2 When you finish recording a clip you wish to mark, press the assignable button.
   - A message indicating the clip mark will appear on the monitoring screen and the selected clip mark will be added to the XF-AVC clip.

NOTES
- A clip cannot have both an OK mark and a ✓ mark at the same time.

Using Metadata

The camera automatically adds metadata to XF-AVC clips while they are being recorded. You can use Canon XF Utility to check and search for specific metadata. You can also create and transfer a user memo remotely using Browser Remote on a connected network device (📖 166, 176).

Metadata components

Metadata	Entering content			Checking content
	Camera	Canon XF Utility	Browser Remote	Canon XF Utility
User Memo: clip title, creator, location and description.	–	●[1]	●	●
GPS information: altitude, latitude and longitude.	●[2]	●[3]	●	●
Information about the recording: scene and take.	●	–	–	●
Information about camera settings: shutter speed, ISO speed/gain value, etc.	–[4]	–	–	●
Unique Material Identifiers (UMID): country, organization and user codes based on the SMPTE standard.	● (📖 189)	–	–	–

[1] User memo files need to be created using the software and saved on an SD card in advance.
[2] Only when an optional GP-E1 GPS Receiver is attached to the camera. While recording, GPS information is recorded automatically by the camera (📖 120).
[3] GPS information can only be added to clips already recorded.
[4] Recording data is logged automatically by the camera.

Setting a User Memo Created with Canon XF Utility

Before you can add a user memo, you must first download and install Canon XF Utility (📖 158). Next, create the user memo and then save it to an SD card. Once you insert the SD card in the camera and select the user memo, it will be added to clips you record.

1 Use Canon XF Utility to save a user memo file to an SD card.
   - For details, refer to *Managing User Memo Profiles* in the Canon XF Utility Instruction Manual.

2 Insert the SD card into the camera's SD card slot.

3 Open the metadata [Setting] submenu.
   MENU/EVF ▸ [Rec/Media Setup] (🎥) ❯ [Metadata] ❯ [Setting]

4 Select [SD Card] and then press SET.

5 From the same submenu select [User Memo] and select the file name of the desired user memo file.
   - Select [Off] to record clips without a user memo.

6 Press [OK] (camera menu) or press SET (monitoring menu).

ⓘ NOTES

- After you set a user memo, do not remove the SD card while you are recording. If the SD card is removed, the user memo will not be added to the clip.
- You must set the user memo before you start recording for it to be added to the clip. You cannot change the user memo already added to a clip using the camera but you can do so with Canon XF Utility.
- When the optional GP-E1 GPS Receiver is attached to the camera and the GPS function is activated, the user memo information will not be recorded, even if you have selected a user memo file from the SD card.

Entering Information About the Recording

You can enter scene and take information to help identify the recording later on.

1 Open the [Scene] or [Take] submenu.

Camera menu: MENU ▸ [Rec/Media Setup] ❯ [Metadata] ❯ [Scene] or [Take]
Monitoring menu: EVF ▸ [Rec/Media Setup] ( ) ❯ [Metadata] ❯ [Scene] or [Take] ❯ [Set]*

* To clear the scene/take information, select [Reset] instead.

2 Enter the desired text using the keyboard screen (📖 37).

Recording GPS Information (Geotagging)

When the optional GP-E1 GPS Receiver is attached to the camera's system extension terminal, the camera will automatically record GPS information (latitude, longitude and altitude) as part of the metadata of XF-AVC clips (🕮 118). Later, the GPS information can be used to organize and search clips using Canon XF Utility (🕮 158). For details about attaching and configuring the receiver, refer to the GP-E1's instruction manual.

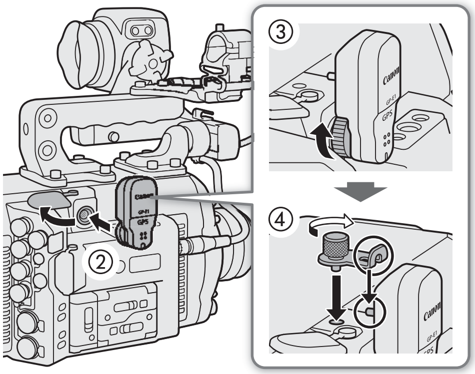
Attaching the GPS Receiver

1 Press the POWER button to turn off the camera.

2 Attach the optional GP-E1 GPS Receiver to the camera's system extension terminal.

3 Fasten the GPS receiver's locking screw.

4 Attach the supplied extension unit attachment bracket to secure the GPS receiver.



NOTES

- Do not lay cables connected to the SDI OUT terminals, MON. terminals or HDMI OUT terminal near the GPS receiver. Doing so may negatively affect the GPS signal reception.

Activating the GPS Receiver

1 Open the GPS [Activate] submenu.

MENU/EVF ▸ [System Setup] (🔧) ❯ [GPS] ❯ [Activate]

2 Select [On] and then press SET.

- The 🛰 icon appears on the HOME screen and at the top left of the monitoring screen. It will flash as the receiver tries to acquire satellite signals.
- When satellite signals are correctly acquired, the 🛰 icon will stay continuously on. GPS functions will be activated and clips recorded thereafter will be geotagged.

Adjusting the date/time automatically according to GPS position

You can set MENU ▸ [System Setup] ❯ [GPS] ❯ [Auto Time Setting] to [On], to have the camera automatically adjust its date and time settings according to the information received from the GPS signal. The date and time will be updated automatically the first time a correct GPS signal is acquired after turning on the camera.

- While the automatic date/time adjustment is activated, the MENU ▸ [System Setup] ❯ [Set Clock] submenu will not be available.

IMPORTANT

- In certain countries/regions, the use of GPS may be restricted. Be sure to use the GPS receiver in accordance with local laws and regulations of the country/region where the receiver is used. Be particularly careful when traveling outside of your home country.
- Be careful about using the GPS receiver in places where the use of electronic devices is restricted.
- The GPS information recorded with clips may contain data that can lead others to locate or identify you. Be careful when sharing geotagged recordings with others or when uploading them to the Web.
- Do not leave the GPS receiver near strong electromagnetic fields such as near powerful magnets and motors.

NOTES

- You can use the MENU ▸ [System Setup] ➜ [GPS] ➜ [Display Info] setting to display the information received from the GPS signal.
- After replacing the power source or when first turning on the camera, it may take longer for the GPS receiver to start receiving the GPS signal.

Using Anamorphic Lenses

You can attach an anamorphic lens to the camera and set the anamorphic desqueeze ratio used to display the image from the camera on monitoring devices while shooting or during playback.

1 Open the [Anamorphic] submenu.

MENU/EVF ▸ [Monitoring Setup] ( ) ❯ [Anamorphic]

2 Select [VIDEO Output] and/or [MON.+HDMI Output], select [On] and then press SET.

- Alternatively, you can press an assignable button set to [Anamorphic: VIDEO] (optional viewfinder only), [Anamorphic: MON.+HDMI] (external monitors only) or [Anamorphic] (all monitoring devices at once) (127).

3 From the same submenu select [Desqueeze Ratio].

4 Select the desired option and then press SET.

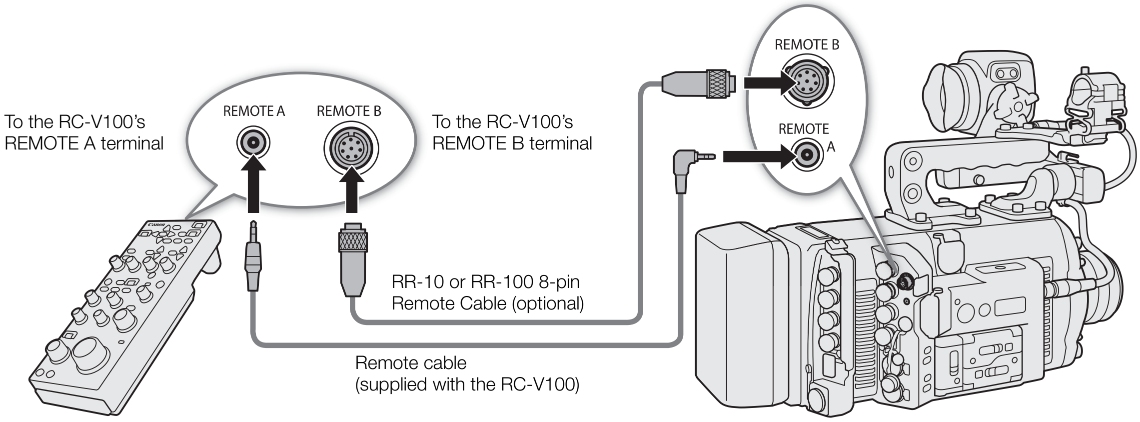
- You can select a fixed desqueeze factor (x1.3 or x2.0) or use the lens's squeeze factor as defined in the metadata ([Lens Squeeze Factor]).

NOTES

- You can record the lens's squeeze factor in the clip's metadata with the MENU ▸ [Rec/Media Setup] ❯ [Metadata] ❯ [Lens Squeeze] setting.
- In the following cases the image from the camera will not be desqueezed.
  - When the HDMI OUT terminal's resolution is set to 4096x2160 or 3840x2160, the image will not be desqueezed on the monitor connected to the HDMI OUT terminal.
  - During photo playback.
  - The camera's live view image in the Browser Remote application.

Using the Optional RC-V100 Remote Controller

You can connect the optional RC-V100 Remote Controller to the camera's REMOTE A terminal or REMOTE B terminal in order to control the camera (including advanced recording functions) from a distance. In addition to turning the camera on and off and navigating the menu, you can control various shooting related functions such as aperture and shutter speed, and custom picture settings like knee and sharpness. When you use the REMOTE B terminal to connect the RC-V100, the camera can receive and process multiple simultaneous commands from the remote controller.
For details on how to connect and use the remote controller, refer to its instruction manual.



1 Turn off the camera and connect the optional RC-V100 Remote Controller to the camera.
- Make sure that the remote controller's terminal selection switch is set to match the terminal to be used on the camera.

2 Turn on the camera and open the [REMOTE Term.] submenu.
MENU/EVF ▸ [System Setup] (🔧) ❯ [REMOTE Term.]

3 Select [RC-V100 (REMOTE A)] or [RC-V100 (REMOTE B)] depending on the terminal used and then press SET.

Options

[RC-V100 (REMOTE A)] or [RC-V100 (REMOTE B)], depending on the terminal used:
Select this option to use the optional RC-V100 Remote Controller connected to the corresponding REMOTE terminal.

[Standard]: Select this option to use commercially available remote controls.

NOTES
- The following controls on the remote controller will not operate the camera: AGC button and AUTO KNEE button.
- The AUTO IRIS button on the remote controller will have an effect only when a compatible EF lens (📖 221) is attached to the camera.
- The ZOOM dial on the remote controller will have an effect only when a compatible EF Cinema/broadcast lens (📖 221) is attached to the camera.
- Adjusting custom picture related settings with the remote controller will have an effect only when the editing of the custom picture file's detailed settings ([Other Settings] ❯ [Activate]) is enabled (📖 131).
- The REMOTE A and REMOTE B terminals cannot be used at the same time.

- If you plan on connecting the remote controller to the camera using the optional RR-10 or RR-100 8-pin Remote Cable, check the serial number of the RC-V100. If the serial number starts with “01 xxxx” (where xxxx represents other digits), you will need to update the remote controller’s firmware. Canon will perform this feature upgrade, and requires that the remote controller be sent to an accredited Canon Service Center. Shipping and handling charges may apply. Contact a Canon Customer Support Center for details.

Taking Photos

You can take photos when the camera is in record standby mode. Photos are saved onto the SD card and their size depends on the video configuration currently in use.

Resolution	Photo size	Approximate file size per image
4096x2160, 2048x1080	2048x1080	930 KB
3840x2160, 1920x1080	1920x1080	880 KB

Taking Photos

To take a photo, set an assignable button to [Photo] in advance.

1 Set an assignable button to [Photo] (📖 127).

2 When the camera is in record standby mode, press the assignable button to take a photo.

- 📷 will appear momentarily on the HOME screen and at the top right of the monitoring screen. On the monitoring screen only, the number of remaining available photos will be displayed as well.
- The SD card access indicator will illuminate in red as the photo is being recorded.

IMPORTANT

- Observe the following precautions while the SD card access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not remove the power source or turn off the camera.
  - Do not remove the SD card.

NOTES

- If the LOCK switch on the SD card is set to prevent writing, you will not be able to record photos. Change the position of the LOCK switch in advance.

Photo Numbering

Photos are automatically assigned consecutive numbers and stored on the SD card in folders. You can select the photo numbering method to be used.

1 Open the [Photo Numbering] submenu.

MENU/EVF ▸ [Rec/Media Setup] (📁) ▸ [Photo Numbering]

2 Select the desired option and then press SET.

Options

[Reset]: Photo numbers will restart from 100-0001 every time you insert a new SD card. If an SD card already contains previous recordings, photo numbers will continue from the number following that of the last photo on the SD card.

[Continuous]: Photo numbers will continue from the number following that of the last photo recorded with the camera. This setting is the most convenient for managing files on a computer. We recommend using the [Continuous] setting.

Understanding folder names

- An example folder name is “101_1103”. The first 3 digits indicate the folder number (from 100 to 999) and the last 4 digits indicate the month and day when the folder was created. In the example, the folder numbered 101 was created on November 3.

Understanding photo numbers

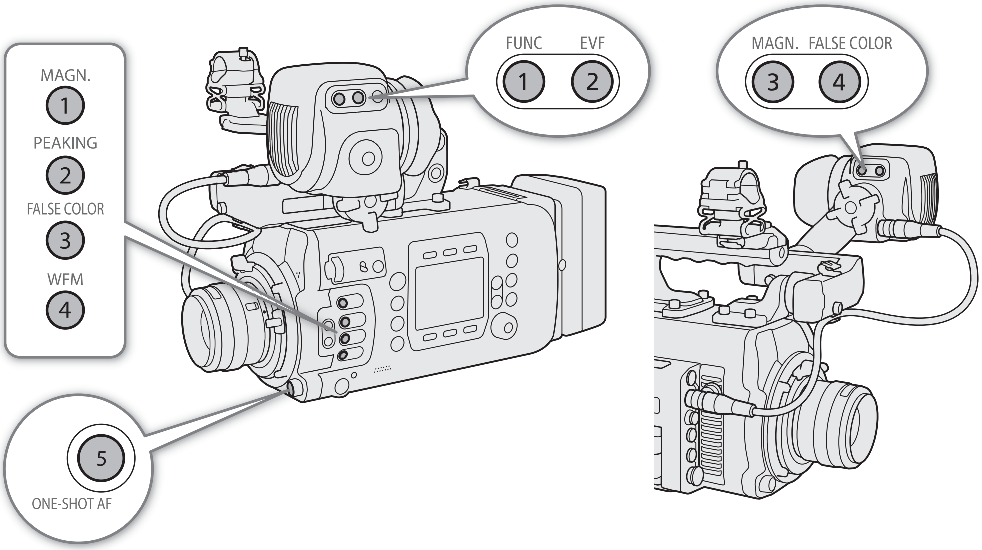
- An example photo number is “101-0107”. The first 3 digits indicate the folder number where the photo is stored and the last 4 digits indicate the consecutive number assigned to the photo (from 0001 to 9999).
- The photo number also indicates the name and location of the file on the SD card. For example, a photo numbered 101-0107 that was recorded on November 3, is located in the “DCIM**101**_1103” folder as the file “IMG_**0107**.JPG”.

NOTES

- Each folder can contain up to 500 files. When that number is exceeded, a new folder is created automatically.

Assignable Buttons and Customizable USER Screen

The camera offers a number of physical buttons to which you can assign various functions (assignable buttons). Additionally, the control display offers the USER screen that you can customize by assigning various functions to each of the 6 screen buttons. Assign often-used functions to the buttons/screen buttons you find most convenient, to personalize the camera to your needs and preferences.
You can find 5 assignable buttons on the camera's body. The following optional accessories offer additional assignable buttons that can be used when the accessory is attached to the camera: EVF-V70 OLED Electronic Viewfinder – 4 assignable buttons, SG-1 Shoulder Style Grip Unit – 1 assignable button, RC-V100 Remote Controller – 4 assignable buttons. In most cases, the names of the buttons printed on the camera and optional accessories also indicate their default settings.



Changing the Assigned Function and Using an Assignable Button

1 Press the MENU button and, while holding it pressed down, press the assignable button whose function you wish to change.
  - A list of available functions appears with the current function assigned to the button highlighted.
  - You can also open the submenu corresponding to the button whose function you wish to change under MENU/EVF ▸ [System Setup] (🔧) ➤ [Assignable Buttons] ➤ [Camera], [EVF-V70], [Grip SG-1] or [Remote RC-V100].

2 Select the desired function and then press SET.
- The selected function will be assigned to the selected button.
- If you selected one of the preset functions, the rest of the procedure is not necessary. If you selected [User Setting], the menu's title bar will change to blue to indicate you are selecting a menu setting to register. Continue the procedure to register a menu setting.

3 Navigate the menus to find the menu setting you want to register and then press SET.
- The selected menu setting will be assigned to the selected button. User-selected settings will be indicated with a ★ in the assignable buttons' submenu.

4 Close the menu and press the assignable button to use the assigned function.

NOTES
- Depending of the function assigned, when you press an assignable button, the monitoring menu may open on the monitoring screen with a submenu already selected. In such case, select the desired option and then press SET.
- You can reset only the functions assigned to the assignable buttons, without affecting other camera settings, with the MENU ▸ [System Setup] ⮞ [Reset] ⮞ [Assignable Buttons] function. All the assignable buttons will return to their default functions.

Assignable Functions

Refer to the following table for assignable functions. During playback mode, only the assignable buttons on the optional viewfinder or optional RC-V100 Remote Controller can be used and they can be set to different functions from those assigned in shooting mode.

Function name	Description	📖
[(NONE)]	No function assigned – the button is disabled.	–
C700 [One-Shot AF]	The camera focuses automatically one time only (one-shot AF function).	92
C700 [AF Lock]	Locks the focus during continuous AF or AF-boosted MF mode.	95
C700 [Face AF]	Toggles the [Face AF] setting between [Face Priority] and [Face Only].	96
C700 [Face Detection]	Turns the face detection function on/off.	
C700 [Tracking]	Turns the tracking function on/off.	97
C700 [Focus Guide]	Turns the Dual Pixel Focus Guide function on/off.	90
[Peaking]	Turns peaking on/off.	91
[Peaking: VIDEO], [Peaking: MON.+HDMI]	Turns peaking on/off on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	
[Magnification]	Turns magnification on/off.	92
[Magn.: VIDEO], [Magn.: MON.+HDMI]	Turns the magnification on/off on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	
[Push Auto Iris][1]	The camera automatically adjusts the aperture only while the button is held pressed down.	81
[Iris Mode][1]	Switches the aperture adjustment mode between automatic and manual.	79
[Iris +][1], [Iris –][1]	Opens up/closes the aperture, respectively.	80
[ND +], [ND –]	Cycles through ND filter settings in increasing/decreasing (higher/lower density) order, respectively.	78
[AE Shift +][1], [AE Shift –][1]	Compensates the exposure making the image brighter/darker, respectively.	82
[Backlight], [Spotlight]	Toggles the light metering mode between [Standard] and [Backlight]/[Spotlight], respectively.	82
[Zebra]	Turns zebra patterns on/off.	99
[Zebra: VIDEO], [Zebra: MON.+HDMI]	Turns the zebra patterns on/off on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	

Function name	Description	📖
[False Color]	Turns the false color display on/off.	100
[False Color: VIDEO], [False Color: MON.+HDMI]	Turns the false color display on/off on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	
[False Color: MON.1], [False Color: MON.2], [False Color: HDMI]	Turns the false color display on/off on an individual external monitor connected to the respective terminal.	
[False Color Index]	Displays/hides the false color index on the monitoring screen.	
[Waveform Monitor][2]	Turns the waveform monitor on/off.	115
[WFM: VIDEO][2], [WFM: MON.+HDMI][2]	Turns the waveform monitor's on/off on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	
[LUT]	Turns on/off the application of the selected LUT to all monitoring devices.	154
[LUT: VIDEO], [LUT: MON.1], [LUT: MON.2], [LUT: HDMI]	Turns on/off the application of the selected LUT to the optional viewfinder (VIDEO) or the individual external monitor connected to the respective terminal.	
[LUT: SDI OUT 1/2/3/4], [LUT: SDI OUT 1/2], [LUT: SDI OUT 3/4]	Turns on/off the application of the selected LUT to video output from all the SDI OUT terminals, to video output only from the SDI OUT 1 and SDI OUT 2 terminals, or to video output only from the SDI OUT 3 and SDI OUT 4 terminals, respectively.	
[Set White Balance]	Starts the white balance calibration for a custom white balance setting.	87
[AWB Lock]	While using auto white balance (AWB), locks the current white balance settings.	87
[AWB AWB], [Set A], [Set B], [Daylight], [Tungsten], [WB1 USER_01] to [WB5 USER_05]	Changes the white balance mode/setting to the respective option.	86
[Control Display Setup][2]	Opens the monitoring menu's [Control Display] submenu (setup of the camera's control display or the control display on an optional OU-700 Remote Operation Unit connected to the camera).	31
[Control Display][2]	Turn the camera's control display on/off.	
[EVF-V70 Setup][2, 3, 4]	Opens the monitoring menu's [EVF-V70] submenu (setup of the optional viewfinder).	42
[OSD Output][2]	Turns on/off the camera's onscreen displays on/off.	155
[OSD Output: VIDEO][2], [OSD Output: MON.+HDMI][2]	Turns on/off the camera's onscreen displays on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	
[Markers]	Turns onscreen markers on/off.	98
[Markers: VIDEO], [Markers: MON.+HDMI]	Turns onscreen markers on/off on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	
[Anamorphic]	Turns the anamorphic desqueeze on/off.	122
[Anamorphic: VIDEO], [Anamorphic: MON.+HDMI]	Turns on/off the application of the anamorphic desqueeze on the optional viewfinder (VIDEO) or on all external monitors connected to the MON. terminals or HDMI OUT terminal, respectively.	
[Color Bars]	Turns color bars on/off.	114
[Photo]	Records a photo.	125
[Time Code][3, 4]	Displays the monitoring menu's [Time Code] submenu.	101
[Time Code Hold][2]	Puts the time code display on hold or resumes it.	102
[Add OK Mark][2]	Adds an OK mark to the clip.	146
[Add ✓ Mark][2]	Adds a ✓ mark to the clip.	
[Headphones +][2], [Headphones –][2]	Increases/reduces the headphone volume, respectively.	113, 143
[Monitor Channels][2]	Switches the audio output channel.	157
[Audio Lvl Indicator][2]	Displays/hides the audio level meter on the monitoring screen.	111
[FUNC][3, 4]	Enters the direct setting mode, replicating the function of the optional viewfinder's FUNC button.	73
[Slow&Fast Frame Rate][3, 4]	When slow & fast motion recording is activated, enters the direct setting mode with the shooting frame rate underlined and ready to be adjusted.	68

Function name	Description	📖
[Shutter][3, 4]	Enters the direct setting mode with the shutter speed underlined and ready to be adjusted.	75
[ISO/Gain][3, 4]	Enters the direct setting mode with the ISO speed or gain value underlined and ready to be adjusted.	77
[White Balance][3, 4]	Enters the direct setting mode with the white balance underlined and ready to be adjusted.	86
[Custom Picture][3, 4]	Opens the monitoring menu's [Custom Picture] (CP) submenu.	131
[My Menu][3]	Opens the monitoring menu's [My Menu] customized submenu.	35
[Initialize Media][2, 3]	Opens the monitoring menu's [Initialize Media] submenu.	51
[★ User Setting][3, 4]	Customizable slot. Assign to the button any monitoring menu setting you would like to register.	–

[1] This function cannot be assigned to the optional SG-1 Shoulder Style Grip Unit.
[2] This function can be used also in playback mode (assignable buttons only).
[3] This function opens the monitoring menu or can only be operated from that menu.
[4] This function is not available for the USER screen.

Customizing and Using the USER Screen

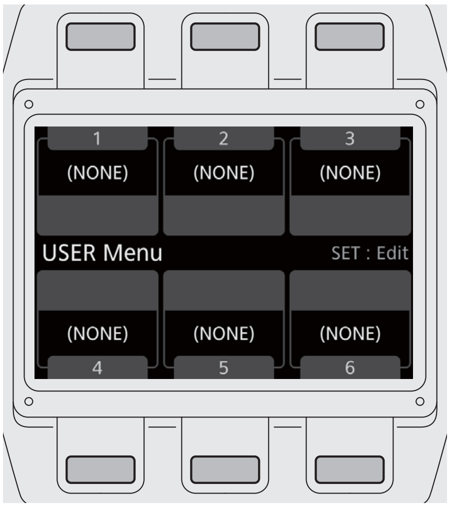
In addition to the USER screen that can be used with the camera's control display, the optional OU-700 Remote Operation Unit offers an additional USER screen that can be customized and used separately from that of the camera.

1 Press the USER button and then press SET.
   - Screen buttons not yet assigned will appear as [(NONE)]. The first available screen button position will be highlighted with an orange selection frame.

2 Turn the SELECT dial to select the screen button you wish to assign or edit and then press SET.
   - A list of available functions appears with the current function assigned to the screen button highlighted.
   - The functions that can be assigned are mostly the same as for assignable buttons (📖 128).

3 Select the desired function and then press SET.
   - The selected function will be assigned to the selected screen button.

4 Whenever necessary, press the USER button to open the USER screen and press the desired screen button to use the functions you customized.



Custom Picture Settings

The camera lets you change many settings (□ 134) that control various aspects of the image produced. As a set, all these settings are treated as a single custom picture file. After adjusting the desired settings to your preference, you can save up to 20 custom picture files (in the camera or on an SD card), and load them later to apply exactly the same settings (□ 133). You can also save the custom picture file as part of the metadata recorded with XF-AVC clips (□ 133).
Custom picture settings have no effect during RAW video recording/output.

NOTES
- Custom picture files are exclusively compatible for use only with C700 / C700 PL / C700 GS PL cameras.

Selecting Custom Picture Files

Select a custom picture file to apply its settings to your recordings or to edit, rename, protect, or transfer it.

1 Open the custom picture file's selection screen.
HOME screen: HOME ▸ [COLOR] ❯ [CP OTHERS] ❯ [File] ❯ [Select]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [File] ❯ [Select]

2 Turn the SELECT dial to select the desired file and then press [OK] (HOME screen) or press SET (monitoring menu).
- Select one of the custom picture files saved in the camera (C1 to C20). To use the settings of a custom picture file saved on an SD card, copy the file to the camera in advance (□ 133).
- When you close the menu, the selected custom picture file's settings will be applied. The [Gamma] and [Color Space] settings currently in use are displayed under [COLOR] in the HOME screen and their icons will appear at the left of the monitoring screen.
- If editing of the custom picture file's detailed settings ([Other Settings] ❯ [Activate]) was enabled (□ 131), CP will appear at the left of the monitoring screen.

NOTES
- **About changing custom picture related settings using the optional RC-V100 Remote Controller**
  - When an optional RC-V100 Remote Controller is connected to the camera, you can press the remote controller's CUSTOM PICT. button to open the monitoring menu's [Custom Picture] (CP) submenu.
  - If a protected custom picture file is selected on the camera, custom picture related settings cannot be changed using the remote controller.
  - Adjusting custom picture related settings using the remote controller will change the settings registered under the currently selected custom picture file. If you want to keep an important custom picture file, copy it in advance to an SD card or select in advance a custom picture file you do not mind changing.

Editing a Custom Picture File's Detailed Settings

1 Turn off the preset color settings.
HOME screen: HOME ▸ [COLOR] ❯ [CP MAIN] ❯ [Preset] ❯ [Off]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [Preset] ❯ [Off]

2 If necessary, change the gamma curve, color space and/or color matrix (□ 134).
HOME screen: From the same submenu select [Gamma]/[Color Space]/[Color Matrix]; select the desired setting and then press SET.
Monitoring menu: Select [Main Settings] ❯ [Gamma] /[Color Space]/[Color Matrix]; select the desired setting and then press SET.

3 Press the BACK button.

4 Enable the editing of the custom picture file's detailed settings.
HOME screen: [CP OTHERS] ❯ [Other Settings] ❯ [Activate] ❯ [On]
Monitoring menu: [Other Settings] ❯ [Activate] ❯ [On]

5 From the same submenu select a detailed setting you wish to adjust and then press SET.

6 Change the setting to the desired level and then press SET.
- Refer to *Available Custom Picture Settings* (🕮 134) for details on the various settings.
- Repeat steps 5 and 6 for other settings, as necessary.
- When you close the menu, the new custom picture settings will be applied.

Resetting Custom Picture Files

1 Select a custom picture file (🕮 131).

2 Open the [Reset] submenu.
HOME screen: HOME ▸ [COLOR] ❯ [CP OTHERS] ❯ [File] ❯ [Reset]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [File] ❯ [Reset]

3 Press both [RESET] buttons simultaneously (HOME screen) or select [OK] and then press SET (monitoring menu).

Renaming Custom Picture Files

1 Select a custom picture file (🕮 131).

2 Open the [Rename] submenu.
HOME screen: HOME ▸ [COLOR] ❯ [CP OTHERS] ❯ [File] ❯ [Rename]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [File] ❯ [Rename] ❯ [Input]

3 Enter the desired file name (up to 8 characters) using the keyboard screen (🕮 37).

Protecting Custom Picture Files

Protecting a custom picture file prevents its settings from being accidentally changed.

1 Select a custom picture file (🕮 131).

2 Open the [Protect] submenu.
HOME screen: HOME ▸ [COLOR] ❯ [CP OTHERS] ❯ [File] ❯ [Protect]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [File] ❯ [Protect]

3 Select [Protect] and then press SET.
- 🔑 will appear next to the file name.
- To remove the protection settings, select [Unprotect] instead.

Copying Custom Picture Files

You can transfer custom picture files between the camera and SD card.

Copying a File from the Camera to an SD Card

1 Select a custom picture file (□ 131).

2 Open the [Copy to SD] submenu.

HOME screen: HOME ▸ [COLOR] ❯ [CP OTHERS] ❯ [File] ❯ [Transfer] ❯ [Copy to SD]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [File] ❯ [Transfer] ❯ [Copy to SD]

3 Select the destination file and then press [OK] (HOME screen) or press SET (monitoring menu).

- Select an existing custom picture file to overwrite it or [New File] to save the settings as a new custom picture file on the SD card.

4 Press both [COPY] buttons simultaneously (HOME screen) or select [OK] and then press SET (monitoring menu).

- The file on the SD card will be overwritten or a new file will be created on the SD card.

5 When the confirmation message appears, press [OK] (HOME screen) or press SET (monitoring menu).

Replacing a File in the Camera with a File on an SD Card

1 Select the custom picture file that you wish to replace (□ 131).

2 Open the [Load from SD] submenu.

HOME screen: HOME ▸ [COLOR] ❯ [CP OTHERS] ❯ [File] ❯ [Transfer] ❯ [Load from SD]
Monitoring menu: EVF ▸ [Custom Picture] (CP) ❯ [File] ❯ [Transfer] ❯ [Load from SD]

3 Select the file with the settings that you want to replicate and then press [OK] (HOME screen) or press SET (monitoring menu).

4 Press both [LOAD] buttons simultaneously (HOME screen) or select [OK] and then press SET (monitoring menu).

- The file in the camera will be overwritten by the one on the SD card.

5 When the confirmation message appears, press [OK] (HOME screen) or press SET (monitoring menu).

NOTES

- You can also copy to the camera a custom picture file embedded in a clip (□ 148).

Embedding Custom Picture Settings in a Clip

When you record an XF-AVC clip using custom picture settings, you can have the custom picture file embedded in the metadata and saved along with the clip. Later, you can copy the custom picture file embedded in the clip to the camera (□ 148) and use the same custom picture settings to record additional clips.

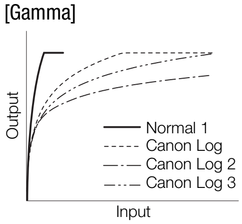
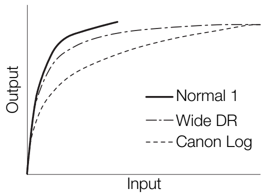
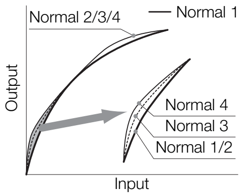
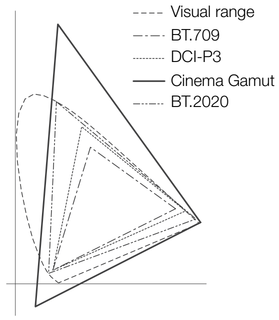
1 Open the [Add CP File] submenu.

MENU/EVF ▸ [Rec/Media Setup] (⚙) ❯ [Metadata] ❯ [Add CP File]

2 Select [On] and then press SET.

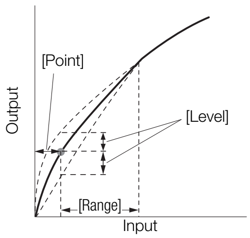
Available Custom Picture Settings

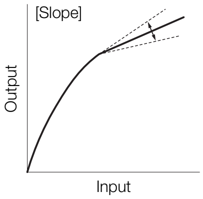
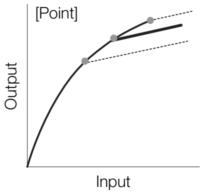
Preset and Main Settings

Submenu levels / Menu items	Options / Additional information
[Preset]	[Canon Log 3 : C.Gamut], [Canon Log 3 : BT.2020], [Canon Log 3 : DCI-P3], [Canon Log 3 : BT.709], [Canon Log 2 : C.Gamut], [Canon Log 2 : BT.2020], [Canon Log 2 : DCI-P3], [Canon Log 2 : BT.709], [Canon Log], [BT.2020], **[BT.709]**, [Off]
	The camera offers a number of preset color settings (combinations of color space, gamma curve and color matrix). For details, refer to *Preset Color Settings* (📖 84). [Off]: Select this setting when you want to set a different combination of custom picture settings with the individual custom picture settings described below.
[Main Settings]	
[Gamma]	[Canon Log 3], [Canon Log 2], [Canon Log], **[Wide DR]**, [Normal 1 (Standard)], [Normal 2 (x4.0)], [Normal 3 (BT.709)], [Normal 4 (x5.0)]
  	Changes the overall look of the image. [Canon Log 3]: Logarithmic gamma curve that keeps the characteristics of the [Canon Log] setting while expanding its dynamic range. Requires image processing in post-production. [Canon Log 2]: Logarithmic gamma curve that obtains a richer color gradation in the dark areas of the image. Requires image processing in post-production. [Canon Log]: Logarithmic gamma curve that obtains an impressive dynamic range. Requires image processing in post-production. [Wide DR]: Gamma curve with a very wide dynamic range. Optimized for playback on TV monitors. [Normal 1 (Standard)]: Standard picture for playback on TV monitors. [Normal 2 (x4.0)]: Setting suitable for playback on TV monitors. Produces brighter highlights (bright areas of the image) than with the [Normal 1 (Standard)] setting. [Normal 3 (BT.709)]: Setting suitable for playback on TV monitors. Produces a more faithful black gradation in the shadows (dark areas of the image) than with the [Normal 2 (x4.0)] setting. [Normal 4 (x5.0)]: Setting suitable for playback on TV monitors. Produces even better black gradation in the shadows (dark areas of the image) than with the [Normal 3 (BT.709)] setting.
[Color Space]	[Cinema Gamut], [BT.2020 Gamut], [DCI-P3 Gamut], **[BT.709 Gamut]**
	Determines the color space of the image. [Cinema Gamut]: Color space developed by Canon based on the specific characteristics of the camera's imaging sensor. It covers a wider color gamut than that of BT.2020. Use this setting with workflows that require ACES2065-1 color space. [BT.2020 Gamut]: Color space that meets ITU-R BT.2020 standards, which defines parameters for ultra-high-definition television (4K/8K). [DCI-P3 Gamut]: Color space that meets the guidelines established by DCI (Digital Cinema Initiatives). [BT.709 Gamut]: Standard color space that is compatible with sRGB specifications.

Submenu levels / Menu items	Options / Additional information
[Color Matrix]	**[Neutral]**, [Production Camera], [Cinema EOS Original], [Video], [Off]
	The color matrix affects the overall color tonality of the image. [Neutral]: Reproduces neutral colors. [Production Camera]: Reproduces colors more suitable for motion picture production. [Cinema EOS Original]: Color matrix developed by Canon, designed to reproduce the 4K output of an EOS C500 camera using the BT.709 color space. [Video]: Reproduces the colors of an EOS C300/EOS C500 camera with no custom picture settings applied. [Off]: Colors are not adjusted.

Other Settings

Submenu levels / Menu items	Options / Additional information
[Other Settings]	
[Activate]	[On], **[Off]**
	Set this setting to [On] to enable the editing of the custom picture's detailed settings explained in this table.
[Black]	
[Master Pedestal]	–50 to 50 **(±0)**
	Increases or decreases the black level. Higher settings will make dark areas brighter but decrease contrast. When [Gamma] is set to one of the Canon Log settings, this setting has no effect on the picture.
[Master Black Red], [Master Black Green], [Master Black Blue]	–50 to 50 **(±0)**
	These settings correct the color cast in blacks. When [Gamma] is set to one of the Canon Log settings, these settings have no effect on the picture.
[Black Gamma]	
[Level]	–50 to 50 **(±0)**
[Range], [Point]	–20 to 50 **(±0)**
	These settings control the lower part of the gamma curve (dark areas of the image). When [Gamma] is set to one of the Canon Log settings or [Wide DR], these settings have no effect on the picture. [Level]: Raises or lowers the lower part of the gamma curve. [Range]: Selects the adjustment range from the selected [Point]. [Point]: Determines the shape of the lower part of the gamma curve.
[Low Key Satur.]	
[Activate]	[On], **[Off]**
	Set this setting to [On] to enable the adjustment of color saturation in dark areas with the [Level] setting.
[Level]	–50 to 50 **(±0)**
	Specifies how saturated colors are in dark areas.
[Knee]	
[Activate]	[On], [Off]
	Set this setting to [On] to enable the adjustment of the knee point with the following settings.

Submenu levels / Menu items	Options / Additional information
[Slope]	–35 to 50 **(±0)**
[Point]	50 to 109 **(95)**
[Saturation]	–10 to 10 **(±0)**
 	These settings control the upper part of the gamma curve (highlights of the image). By compressing the highlights, you can prevent parts of the image from being overexposed. When [Gamma] is set to one of the Canon Log settings or [Wide DR], these settings have no effect on the picture. [Slope]: Determines the slope of the gamma curve above the knee point. [Point]: Sets the knee point of the gamma curve. [Saturation]: Adjusts the color saturation in the highlights.
[Sharpness]	
[Level]	–10 to 50 **(±0)**
	Sets the sharpness level of the video output signal and the recorded signal.
[H Detail Freq.]	–8 to 8 **(±0)**
	Sets the center frequency of horizontal sharpness. Setting higher values increases the frequency, which, in turn, increases the sharpness.
[Coring Level]	–30 to 50 **(±0)**
	Sets the level of correction of artifacts caused by high sharpness levels (coring). Higher values prevent sharpness from being applied to minute details, resulting in less noise.
[Coring D-Ofst]	0 to 50 **(0)**
	Sets the coring level of the minimum brightness level (level-dependent offset).
[Coring D-Curve]	0 to 8 **(0)**
	Sets the curve of coring adjustment, in other words, how the coring level changes from the value set for [Coring Level] to that set for [Coring D-Ofst] (level-dependent curve).
[HV Detail Bal.]	–8 to 8 **(±0)**
	Adjusts the ratio between horizontal and vertical detail. Higher values emphasize vertical detail while lower values emphasize horizontal detail.
[Limit]	–50 to 50 **(±0)**
	Restricts how much sharpness is applied.
[Select]	0 to 15 **(0)**
	In addition to the sharpness set by [Level], [Select] sets the sharpness for areas with higher frequencies. Higher values apply more sharpness to areas with higher frequencies. Use this for subjects in which normal sharpening is not effective.
[Knee Aperture Gain]	0 to 9 **(0)**
[Knee Aperture Slope]	0 (no slope), 1 (steep slope) to 3 (gradual slope) **(1)**
	These settings allow you to adjust the sharpness of only the areas above the knee point. When [Gamma] is set to one of the Canon Log settings or [Wide DR], these settings have no effect on the picture. [Knee Aperture Gain]: Determines the amount of sharpness. [Knee Aperture Slope]: Sets the slope of the sharpness.
[Level Depend Level]	0 to 50 **(0)**
	Sets the brightness of the dark areas of the image that will be affected.

Submenu levels / Menu items	Options / Additional information
[Level Depend Slope]	0 (no slope), 1 (steep slope) to 3 (gradual slope) **(0)**
	Determines the slope of the area between the upper and lower parts of the gamma curve.
[Level Depend Offset]	0 to 50 **(0)**
	Adjusts the sharpness level of dark areas in the image. Setting higher values will lower the sharpness level.
[Noise Reduction]	1 (lowest level) to 12 (highest level), **[Off]**
	Reduces the amount of noise that appears in the image.
[Skin Detail]	
[Effect Level]	[High], [Middle], [Low], **[Off]**
[Hue]	–16 to 16 **(±0)**
[Chroma], [Area], [Y Level]	0 to 31 **(16)**
	The camera applies a softening filter to areas in the picture with skin tones to give a more pleasant appearance. By changing these settings, you can determine what areas will be detected as skin tones. A zebra pattern will appear on the monitoring screen over areas of the image that are detected as having skin tones. [Effect Level]: Adjusts the level of the filter. [Hue]: Adjusts the hue for detection of skin tones. [Chroma]: Adjusts the color saturation for detection of skin tones. [Area]: Adjusts the color range for detection of skin tones. [Y Level]: Adjusts the brightness for detection of skin tones.
[Selective NR]	
[Effect Level]	[High], [Middle], [Low], **[Off]**
[Hue]	0 to 31 **(0)**
[Chroma], [Area], [Y Level]	0 to 31 **(16)**
	The camera detects the characteristics of a certain color or tone and applies a noise reduction filter to the targeted areas. A zebra pattern will appear on the monitoring screen over areas targeted for noise reduction. [Effect Level]: Adjusts the level of the noise reduction filter. [Hue]: Adjusts the hue for the color to be detected. [Chroma]: Adjusts the color saturation for the color to be detected. [Area]: Adjusts the color range for the color to be detected. [Y Level]: Adjusts the brightness for the color to be detected.
[Color Matrix Tuning]	
[Gain]	–50 to 50 **(±0)**
[Phase]	–18 to 18 **(±0)**
	These settings adjust the color intensity ([Gain]) and color phase ([Phase]) of the color matrix, affecting the color tones of the whole image.
[R-G], [R-B], [G-R], [G-B], [B-R], [B-G]	–50 to 50 **(±0)**
	Each matrix changes the tint of the picture along the color gradations detailed below, affecting the color tones of the whole image. [R-G]: cyan/green and red/magenta; [R-B]: cyan/blue and red/yellow; [G-R]: magenta/red and green/cyan; [G-B]: magenta/blue and green/yellow; [B-R]: yellow/red and blue/cyan; [B-G]: yellow/green and blue/magenta.
[White Balance]	
[R Gain], [B Gain]	–50 to 50 **(±0)**
	These settings adjust the amount of white balance throughout the whole image by changing the intensity of red tones ([R gain]) and blue tones ([B Gain]).

Submenu levels / Menu items	Options / Additional information
[Color Correction]	
[Select Area]	[Area A&B], [Area B], [Area A], **[Off]**
	The camera detects areas with certain color characteristics (color phase, chroma, area and Y level) and corrects them when recording. You can set the color correction for up to two different areas (A and B) and apply the color correction to either one ([Area A] or [Area B]) or both of them ([Area A&B]). While color correction is activated, a zebra pattern will appear on the monitoring screen over areas of the image detected as having the characteristics specified for area A or area B.
[Area A Setting Phase], [Area B Setting Phase]	0 to 31 **(0)**
	These settings determine the color phase of the area to be corrected (A or B, respectively).
[Area A Setting Chroma], [Area A Setting Area], [Area A Setting Y Level], [Area B Setting Chroma], [Area B Setting Area], [Area B Setting Y Level]	0 to 31 **(16)**
	These settings determine the following color characteristics of the area to be corrected (A or B, respectively). [Area A Setting Chroma], [Area B Setting Chroma]: Color saturation. [Area A Setting Area], [Area B Setting Area]: Color range. [Area A Setting Y Level], [Area B Setting Y Level]: Brightness.
[Area A Revision Level], [Area B Revision Level]	–50 to 50 **(±0)**
	These settings adjust the amount of correction applied to the color saturation in the corrected area (A or B, respectively).
[Area A Revision Phase], [Area B Revision Phase]	–18 to 18 **(±0)**
	These settings adjust the amount of correction applied to the color phase in the corrected area (A or B, respectively).
[Other Functions]	
[Setup Level]	–50 to 50 **(±0)**
	Adjusts the black level set by the [Black] ❯ [Master Pedestal] setting. When [Gamma] is set to one of the Canon Log settings, this setting has no effect on the picture.
[Over 100%]	**[Through]**, [Press], [Clip]
	Determines how the camera handles video signals exceeding 100%. [Through]: Leave the signal unchanged. [Clip]: Clip the signal at 100%. [Press]: Compress a signal of up to 108% down to 100% levels.

NOTES

- If editing of the custom picture file's detailed settings is enabled ([Other Settings] ❯ [Activate] is set to [On]), when an optional RC-V100 Remote Controller is connected to the camera, the following custom picture settings can be changed using the buttons and dials on the remote controller.
  - [Other Settings] ❯ [Black] ❯ [Master Pedestal], [Master Black Red], [Master Black Blue]
  - [Other Settings] ❯ [Black Gamma] ❯ [Level]
  - [Other Settings] ❯ [Knee] ❯ [Slope], [Point] (only when [Knee] ❯ [Activate] is set to [On])
  - [Other Settings] ❯ [Sharpness] ❯ [Level]
  - [Other Settings] ❯ [White Balance] ❯ [R Gain], [B Gain]

Customizing Onscreen Displays

You can use the [Custom Display 1] or [Custom Display 2] settings to customize the onscreen displays that appear on the monitoring in shooting mode and the [Custom Display] settings to customize the onscreen displays that appear during playback. For details on which onscreen displays can be customized, refer to *Onscreen Displays on the Shooting Screen* (📖 59) and *Onscreen Displays During Playback* (📖 144).

1 Open the desired customized displays submenu.

Camera menu: MENU ▸ [Monitoring Setup] ❯ [Custom Display 1] or [Custom Display 2] or
PLAY ▸ MENU ▸ ❯ [Monitoring Setup] ❯ [Custom Display]

Monitoring menu: EVF ▸ [Monitoring Setup] (▦) ❯ [Custom Display 1] or [Custom Display 2] (shooting mode), or [Custom Display] (playback mode)

2 Select the desired onscreen display.

3 Select the desired option and then press SET.

Saving and Loading Camera Settings

After you adjust settings in the various menus and setup screens, you can save those settings in the camera or on an SD card. You can load those settings at a later date or on another C700 / C700 PL / C700 GS PL camera so that you can use that camera in the exact same way.

Saving Camera Settings

1 Open the [Save] submenu.

MENU/EVF ▸ [System Setup] (🔧) ❯ [Transfer Menu/CP] ❯ [Save]

2 Select [To Camera] or [To SD] and then press SET.

3 Press both [SAVE] buttons simultaneously (camera menu) or select [OK] and press SET (monitoring menu).

- The camera's settings will be saved to the selected destination. If settings were previously saved, the old file will be overwritten by the current menu settings.

4 When the confirmation message appears, press [OK] (camera menu) or press SET (monitoring menu).

Loading Camera Settings

1 Open the [Load] submenu.

MENU/EVF ▸ [System Setup] (🔧) ❯ [Transfer Menu/CP] ❯ [Load]

2 Select [From Camera] or [From SD] and then press SET.

3 Press both [LOAD] buttons simultaneously (camera menu) or select [OK] and press SET (monitoring menu).

- The camera's settings will be replaced by the settings saved on the selected source. Then, the screen will turn black momentarily and the camera will restart.

NOTES

- The following settings are not saved with this operation.
  - The following settings in the HOME screen: aperture value and ND filter setting ([IRIS]), shutter speed ([SHUTTER]), ISO speed and gain value ([ISO/GAIN]) and white balance mode and adjustment settings ([WB]) except for the user-set white balance settings, which are saved.
  - Passwords/encryption keys for the various network settings that were changed by the user under the **ALT** ▸ [NETWORK] submenus. (Default passwords are saved.)
- When settings are loaded with this operation, even protected custom picture files in the camera will be replaced.
- The camera settings file saved on the camera will be deleted if you reset the camera using the **MENU** ▸ [System Setup] ❯ [Reset] ❯ [All Settings] option.
- Camera settings files are exclusively compatible for use only with C700 / C700 PL / C700 GS PL cameras.

Playback

This section explains how to play back clips and photos with the camera. For details on playing back clips using an external monitor, refer to *Connecting to an External Monitor or Recorder* (📖 152).

The PLAY (Playback Control) Screen

Press the PLAY button to switch the camera to playback mode.

The PLAY screen will appear on the camera's control display showing the information of the last clip recorded in the camera's main recording format. The camera will enter playback pause mode (❚❚ will appear on the PLAY screen and ❚❚ PAUSE will appear on top of the monitoring screen).

Pressing the HOME, USER, ALT or TC buttons will switch the camera back to shooting mode and open the respective setup screen on the control display.

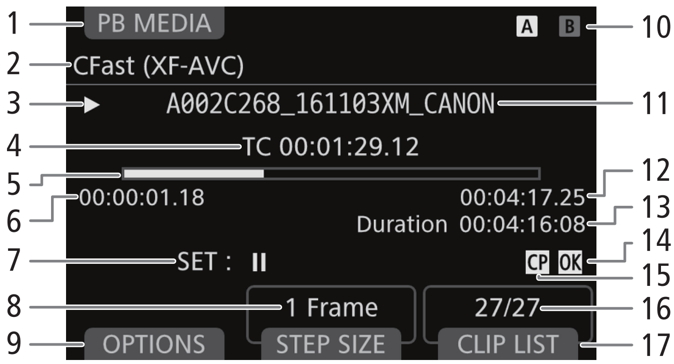
To change the camera's system frequency

The camera cannot play back recording media that were recorded using a system frequency different from that of the camera. To play back such recording media, change the camera's system frequency.

1 Open the [System Frequency] submenu in playback mode.

PLAY ▸ MENU ▸ [Rec/Media Setup] ❯ [System Frequency]

2 Select the system frequency that matches the recordings on the media you wish to play back.



1 [PB MEDIA] (playback media): Press the screen button to select the media and format selected for playback (📖 142).
2 Media/format selected for playback
3 Playback operation: ❚❚ – pause, ▶ – play, ◀❚❚/❚❚▶ - frame reverse/advance.
4 Time code of the current playback position
5 Playback progress bar
6 Start time code
7 Press SET to start/pause the playback. In playback pause, turn the SELECT dial to advance/reverse the playback position (📖 142).
8 [STEP SIZE]: Interval size used to advance/reverse the playback position. Press the screen button repeatedly to change the interval between 1 frame, 1 second or 10% of the clip's duration.
9 [OPTIONS]: Press the screen button to open the clip operations (or photo operations) menu (📖 145).
10 Recording media selected for playback
    A B CFast card (the one currently selected appears in white). Press the SLOT SEL. button to switch to the other CFast card.
    SD SD card
11 Clip file name (📖 62)
12 End time code
13 Clip duration
14 OK mark*/✓ mark* (📖 117, 146)
15 Embedded custom picture file* (📖 133)
16 Clip number / Total number of clips
17 [CLIP LIST]: Press the screen button to open the list of clips in the recording media to select another clip.

* Only for XF-AVC clips.

Selecting the Recording Media and Format to Play Back

When the camera first switches to playback mode, the media and format selected for the main recording will also be selected for playback. Perform the following procedure to select a different type of recordings or recordings from a different media.

From the PLAY screen:

1 Press [PB MEDIA].

- You can also press [PB MEDIA] while the list of clips is displayed.

2 Select the desired option and then press SET.

- If you selected one of the CFast card options: To switch between the CFast cards, press the SLOT SEL. button.

Playing Back Clips

After selecting the format and recording media of the clips you wish to play back, select the desired clip from the list of clips recorded on the selected recording media to play it back.

From the PLAY screen:

1 Press [CLIP LIST] to open the clip list.

2 Turn the SELECT dial to select the desired clip.

3 Press SET to return to the PLAY screen and start playback.

- Playback will start and the video will appear on the monitoring screen (▶ will appear on the PLAY screen and ▶ PLAY will appear on top of the monitoring screen). When the last frame of clip is reached, playback will pause automatically.
- Press SET during playback to pause. Press SET again during playback pause to resume the playback.
- During playback pause you can turn the SELECT dial to change the playback position. Press [STEP SIZE] to change the interval used when you turn the SELECT dial.

IMPORTANT

- Observe the following precautions while an access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not remove the power source or turn off the camera.
  - Do not open the card slot cover of the card being accessed and do not remove the card.

Adjusting the Volume

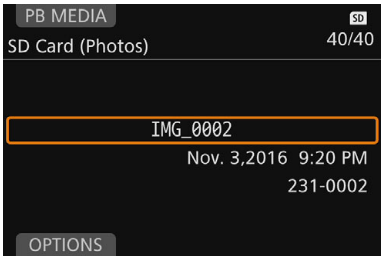
You can connect headphones to the 🎧 (headphone) terminal to listen to the audio during playback. Adjust the headphone volume with the **PLAY** ▸ **MENU** ▸ [Audio Setup] ❯ [Headphone Volume] setting. If you set an assignable button to [Headphones +] or [Headphones –] (🕮 127), you can press the button to adjust the headphone volume without using the menu.
The audio signal will also be output from the SDI OUT terminals, MON. terminals and HDMI OUT terminal.

NOTES

- For details on changing the audio channel, refer to *Audio Output* (🕮 157).

Viewing Photos

After selecting photos as the format to play back, use the SELECT dial to browse through your photos.



From the PLAY screen:

1 Select [SD Card (Photos)] as the media/format to play back (🕮 142).
   - The last recorded photo on the SD card will appear on the monitoring screen and the details of the image file will appear on the PLAY screen (the file name will be highlighted with an orange frame).

2 Turn the SELECT dial to display other photos.

IMPORTANT

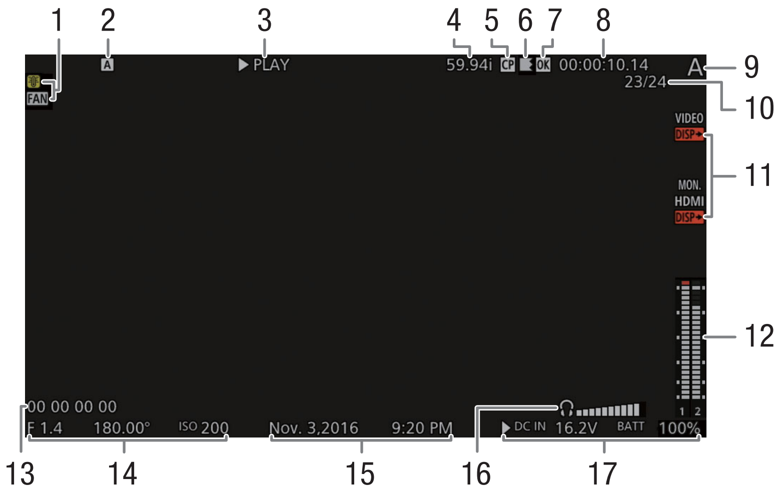
- Observe the following precautions while the SD card access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not remove the power source or turn off the camera.
  - Do not remove the SD card.

NOTES

- The following photos may not be displayed correctly.
  - Photos not recorded with this camera.
  - Image files that were created, edited or renamed using a computer.

Onscreen Displays During Playback

If the output of onscreen displays is activated for the terminal used (📖 155), the following onscreen displays will appear on the monitoring screen during playback, along with the playback image.



1 Temperature warning and fan operation (📖 64)
2 Recording media
  A, B CFast card
  SD SD card
3 Playback operation: ❚❚ – pause, ▶ – play, ◀❚❚/❚❚▶ - frame reverse/advance.
4 Frame rate[1] (📖 65)
5 Embedded custom picture file[2] (📖 133)
6 Relay recording[2] (📖 52)
  indicates the first part of the recording, indicates the middle part(s) and indicates the last part.
7 OK mark[2]/☑ mark[2] (📖 117, 146)
8 Time code (📖 101)
9 Camera index (📖 62)
  Custom display[3]: [Camera Index]
10 Clip number / Total number of clips
11 Onscreen displays output (📖 155)
12 Audio level meter and audio output channel (📖 157)
  Custom display[3]: [Audio Lvl Indicator]
13 User bit[2] (📖 104)
14 Aperture value[2] (📖 79), shutter speed[2] (📖 74) and ISO speed/gain value[2] (📖 76)
  Custom display[3]: [Camera Data]
15 Recording date and time[2]
  Custom display[3]: [Date/Time]
16 Headphones volume (only while adjusting the volume)
17 Power supply voltage (DC IN and battery) (📖 26)
  The power supply currently in use is indicated with a ▶ mark.

[1] For XF-AVC clips recorded using slow & fast motion recording, the shooting frame rate (S&F FPS) and playback frame rate will both be displayed.
[2] Only for XF-AVC clips.
[3] You can turn these onscreen displays on and off individually with the corresponding setting in the **PLAY** ▸ **MENU** ▸ [Monitoring Setup] ❯ [Custom Display] submenu.

Clip/Photo Operations

Using the clip operations menu, you can perform various operations on the clip selected in the PLAY screen or display additional information about the clip. Available options will depend on the format selected for playback. The only operation available for photos is [Delete] (🕮 147) so the following table will show only the clip operations.

Clip operations menu

Menu item	Description	[Playback Media]*		
		[CFast (XF-AVC)]	[CFast (ProRes)]	[SD Card (XF-AVC)]
[Display Clip Info]	Displays the clip information screen on the control display (🕮 145).	●	●	●
[Add OK Mark], [Delete OK Mark]	Adds or deletes an OK mark (🕮 146, 147).	●	–	–
[Add ✓ Mark], [Delete ✓ Mark]	Adds or deletes a ✓ mark (🕮 146, 147).	●	–	–
[Delete]	Deletes a clip (🕮 147).	●	●	●
[Delete User Memo]	Deletes the user memo and GPS information of a clip (🕮 147).	●	–	●
[Copy CP File]	Copies the custom picture file from a clip to the camera (🕮 148).	●	–	●
[Recover Clip]	Recovers data from a corrupted clip (🕮 53).	●	●	●
[FTP Transfer]	Copies a clip to the FTP server using FTP protocol (🕮 182).	–	–	●

* PLAY▸ [PB MEDIA] setting.

IMPORTANT

- Observe the following precautions while an access indicator is illuminated in red. Failure to do so may result in permanent data loss.
  - Do not remove the power source or turn off the camera.
  - Do not open the card slot cover of the card being accessed and do not remove the card.

NOTES

- To perform operations on clips/photos recorded on an SD card, make sure the LOCK switch on the SD card is not set to prevent writing.

Displaying Clip Information

You can display detailed information about the selected clip and the custom picture settings and metadata recorded with the clip.

1 Select the desired clip (🕮 142).

2 Open the clip information screen.

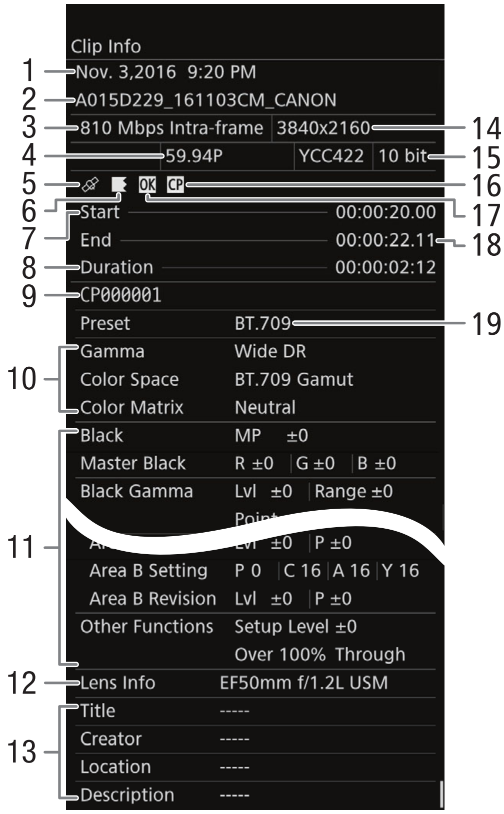
[OPTIONS] ❯ [Display Clip Info]

- The [Clip Info] screen will appear on the control display. Turn the SELECT dial to scroll through all the information.

3 Press the PLAY button (or the BACK button twice) to return to the PLAY screen.

1 Recording date and time
2 Clip file name (□ 62)
3 Bit rate and compression (□ 66)
4 Frame rate* (□ 65)
5 Clip geotagged with GPS information** (□ 120, 176)
6 Relay clip** (□ 52)
  ◧ indicates the first part of the recording, ◨ indicates the middle part(s) and ◼ indicates the last part.
7 Start time code
8 Clip duration
9 Embedded custom picture file** (□ 133)
10 Custom picture file's main settings (□ 134)
11 Custom picture file's detailed settings (□ 135)
12 Lens information**
13 User memo information** (□ 118)
14 Resolution (□ 65)
15 Color sampling (□ 65)
16 Custom picture file embedded
17 OK mark**/☑ mark** (□ 117, 146)
18 End time code
19 Preset color setting (□ 84)

* For XF-AVC clips recorded using slow & fast motion recording, [S&F REC] and both the shooting frame rate and the playback frame rate will be displayed.
** Only for XF-AVC clips.



Adding and Deleting OK Marks or ☑ Marks

You can add an OK mark (OK) or check mark (☑) to XF-AVC clips recorded on the CFast card in order to tag them as special clips. Since clips with an OK mark cannot be deleted with the camera, you can use this mark also to protect important clips.

1 **Select the desired clip (□ 142).**
- Select [CFast (XF-AVC)] as the playback media/format.

2 **Add the clip mark (OK or ☑ mark).**

[OPTIONS] ❯ [Add OK Mark] or [Add ☑ Mark] ❯ [OK]
- Alternatively, you can press an assignable button set to [Add OK Mark] or [Add ☑ Mark] (□ 127).
- [OK Mark] or [☑ Mark] will appear briefly on the monitoring screen and the selected clip mark will be added to the clip. On the control display, OK or ☑ will appear with the clip details on the PLAY screen.

3 **When the confirmation screen appears, press [OK].**

NOTES
- A clip cannot have both an OK mark and ☑ mark at the same time. When you add a ☑ mark to a clip with an OK mark, the OK mark will be deleted. Similarly, when you add an OK mark to a clip with a ☑ mark, the ☑ mark will be deleted.

Deleting OK Marks or ✓ Marks

1 Select the desired clip (📖 142).
- In the clip list select a clip with an OK or ✓ mark.

2 Delete the clip mark (OK or ✓ mark).
[OPTIONS] ❯ [Delete OK Mark] or [Delete ✓ Mark] ❯ [OK]
- Alternatively, you can press an assignable button set to [Delete OK Mark] or [Delete ✓ Mark] (📖 127).
- The selected clip mark will be removed from the clip.

3 When the confirmation screen appears, press [OK].

Deleting Clips and Photos

You can delete clips and photos you are not interested in keeping, except for XF-AVC clips with an OK mark. To delete such clips, delete the OK mark beforehand (📖 147).

1 Select the desired clip or photo (📖 142).

2 Delete the clip or photo.
[OPTIONS] ❯ [Delete]

3 Press both [DELETE] buttons simultaneously.
- The clip or photo will be deleted.

4 When the confirmation screen appears, press [OK].

IMPORTANT
- Be careful when deleting clips and photos. Deleted recordings cannot be recovered with the camera.

Deleting the User Memo and GPS Information

1 Select the desired clip (📖 142).

2 Delete the user memo.
[OPTIONS] ❯ [Delete User Memo]

3 Press both [DELETE] buttons simultaneously.
- The user memo and GPS information will be deleted from the clip.

4 When the confirmation screen appears, press [OK].

Copying a Custom Picture File Embedded in a Clip

You can copy to the camera the custom picture file embedded in an XF-AVC clip.

1 **Select the desired clip (📖 142).**

2 **Review the custom picture settings embedded with the clip.**

[OPTIONS] ❯ [Copy CP File]

- Turn the SELECT dial to scroll through all the information.

3 **Press [FILE] and turn the SELECT dial to select the custom picture file where you want to copy the settings from the clip.**

4 **Press both [COPY] buttons simultaneously.**

- The clip's custom picture settings will be copied to the selected custom picture file, overwriting any previous settings.

5 **When the confirmation screen appears, press [OK].**

ⓘ NOTES

- You cannot copy the custom picture file in a clip to a protected custom picture file.

Video Output Configuration

The video signal output from the SDI OUT terminals, MON. terminals and HDMI™ OUT terminal, depends on the clip's video configuration) and on various menu settings. Refer to the following tables for the video output configuration from each terminal, depending on the main recording video configuration used.

Main Recording Video Configuration and Video Output Configuration from the SDI OUT Terminals

<table>
<tr><th colspan="3">Main recording video configuration</th><th colspan="4">Output from each terminal[3, 4]</th><th rowspan="2">Number of terminals required</th><th rowspan="2">Output signal</th></tr>
<tr><th>[Main Rec Format][1]</th><th>Resolution/
Color sampling</th><th>Frame rate[2]</th><th>SDI OUT 1</th><th>SDI OUT 2</th><th>SDI OUT 3</th><th>SDI OUT 4</th></tr>
<tr><td rowspan="3">[RAW (SDI OUT)]</td><td rowspan="3">4096x2160
RAW</td><td rowspan="2">30P to 60P
(60P inclusive)</td><td colspan="4">Frame-sequential</td><td rowspan="2">2</td><td rowspan="3">3G</td></tr>
<tr><td>RGBA1</td><td>RGBA2</td><td colspan="2"></td></tr>
<tr><td>30P or lower</td><td>RGBA</td><td></td><td></td><td></td><td>1</td></tr>
<tr><td rowspan="12">[XF-AVC (CFast)],

[ProRes (CFast)]</td><td rowspan="4">4096x2160
3840x2160
YCbCr 4:2:2, 10 bit</td><td rowspan="2">30P to 60P
(60P inclusive)</td><td colspan="4">Square division (Quad HD)</td><td rowspan="2">4</td><td rowspan="2">3G</td></tr>
<tr><td>Upper left</td><td>Upper right</td><td>Lower left</td><td>Lower right</td></tr>
<tr><td rowspan="2">30P or lower</td><td colspan="4">Square division (Quad HD)</td><td rowspan="2">4</td><td rowspan="2">HD</td></tr>
<tr><td>Upper left</td><td>Upper right</td><td>Lower left</td><td>Lower right</td></tr>
<tr><td rowspan="2">2048x1080
1920x1080
RGB 4:4:4, 12 or 10 bit[5]</td><td>30P to 60P
(60P inclusive)</td><td colspan="2">RGB</td><td colspan="2"></td><td>2</td><td>Dual link 3G</td></tr>
<tr><td>30P or lower</td><td>RGB</td><td></td><td></td><td></td><td>1</td><td>3G</td></tr>
<tr><td rowspan="6">2048x1080
1920x1080
YCbCr 4:2:2, 10 bit</td><td rowspan="2">120P to 240P
(240P inclusive)</td><td colspan="4">Frame sequential</td><td rowspan="2">4</td><td rowspan="5">3G</td></tr>
<tr><td>YCC1</td><td>YCC2</td><td>YCC3</td><td>YCC4</td></tr>
<tr><td rowspan="2">60P to 120P
(120P inclusive)</td><td colspan="4">Frame sequential</td><td rowspan="2">2</td></tr>
<tr><td>YCC1</td><td>YCC2</td><td colspan="2"></td></tr>
<tr><td>30P to 60P
(60P inclusive)</td><td>YCC</td><td></td><td></td><td></td><td>1</td></tr>
<tr><td>30P or lower,
59.94i[6],
50.00i[6]</td><td>YCC</td><td></td><td></td><td></td><td>1</td><td>HD</td></tr>
</table>

1 MENU ▸ [Rec/Media Setup] ❯ [Main Rec Format] setting.
2 The frame rate of the video output will be the same as that used for recording (except when slow & fast motion recording is activated).
3 The color sampling will be determined by the option selected for the MENU ▸ [Rec/Media Setup] ❯ [Resolution/Sampling] setting.
4 When only one or two SDI connections are required, the other SDI OUT terminals output the same signal as SDI OUT 1 (or SDI OUT 1 and SDI OUT 2). This is indicated by the gray cells in the table.
5 RGB 4:4:4,10 bit is only available when the main recording format is set to [XF-AVC (CFast)].
6 Only when the resolution is 1920x1080.

Main Recording Video Configuration and Video Output Configuration from the MON. Terminals and HDMI OUT Terminal

<table>
<tr><th rowspan="4">[Main Rec Format][1]</th><th colspan="2">Recording video configuration</th><th colspan="4">Video output configuration</th></tr>
<tr><th rowspan="3">Frame rate[2]</th><th rowspan="3">Resolution</th><th colspan="2">MON. terminals[3]</th><th colspan="2">HDMI OUT terminal[3, 5]</th></tr>
<tr><th colspan="2">[MON. Output][4]</th><th colspan="2">[HDMI Max Res.][6]</th></tr>
<tr><th>[2048x1080/
1920x1080]</th><th>[1920x1080]</th><th>[4096x2160/
3840x2160]</th><th>[1920x1080]</th></tr>
<tr><td>[RAW
(SDI OUT)]</td><td>59.94P
50.00P
29.97P
25.00P
24.00P
23.98P</td><td>4096x2160</td><td rowspan="2">2048x1080
YCbCr 4:2:2,
10 bit</td><td rowspan="6">1920x1080
YCbCr 4:2:2,
10 bit</td><td>1920x1080,
720x480
(59.94P),
720x576 (50.00P)</td><td rowspan="6">1920x1080,
720x480
(59.94P),
720x576 (50.00P)</td></tr>
<tr><td rowspan="5">[XF-AVC (CFast)],
[ProRes (CFast)]</td><td rowspan="4">59.94P
50.00P
29.97P
25.00P
24.00P
23.98P</td><td>4096x2160</td><td>4096x2160</td></tr>
<tr><td>3840x2160</td><td>1920x1080
YCbCr 4:2:2,
10 bit</td><td>3840x2160</td></tr>
<tr><td>2048x1080</td><td>2048x1080
YCbCr 4:2:2,
10 bit</td><td rowspan="3">1920x1080,
720x480
(59.94P),
720x576 (50.00P)</td></tr>
<tr><td>1920x1080</td><td rowspan="2">1920x1080
YCbCr 4:2:2,
10 bit</td></tr>
<tr><td>59.94i
50.00i</td><td>1920x1080</td></tr>
</table>

1 **MENU** ▸ [Rec/Media Setup] ❯ [Main Rec Format] setting.
2 The frame rate of the video output will be the same as that used for recording (except when slow & fast motion recording is activated).
3 Onscreen displays and assistance functions like peaking and zebra pattern can be output to an external monitor (except on a monitor connected to the HDMI OUT terminal when the terminal's output is set to 4K (4096x2160 or 3840x2160)).
4 **MENU** ▸ [System Setup] ❯ [Term. Output Setup] ❯ [MON. Output] setting.
5 When **MENU** ▸ [System Setup] ❯ [Term. Output Setup] ❯ [MON. Output] is set to [Off], the HDMI OUT output will change depending on the capabilities of the monitor used. When [MON. Output] is set to a setting other than [Off], if the monitor connected to the terminal does not support the video output configuration, video output from the HDMI OUT terminal will be turned off. When the horizontal resolution of the recording video configuration is 2048, the sides of the image will be cropped. The color sampling will be set automatically to YCbCr 4:2:2, 10 bit, YCbCr 4:4:4, 8 bit or RGB 4:4:4, 8 bit, depending on the capabilities of the external monitor. When the output resolution is 4096x2160 or 3840x2160 and the frame rate is 59.94P or 50.00P, the color sampling will be set automatically to YCbCr 4:2:0, 8 bit.
6 **MENU** ▸ [System Setup] ❯ [Term. Output Setup] ❯ [HDMI Max Res.] setting.

Playback Video Configuration and Video Output Configuration by Terminal

Refer to the following tables for the video output configuration from each terminal, depending on the video configuration of the clip being played back.

Video configuration of the clip		Video output configuration				
			MON. terminals		HDMI OUT terminal[3]	
			[MON. Output][2]		[HDMI Max Res.][4]	
Resolution	Frame rate	SDI OUT terminals[1]	[2048x1080/ 1920x1080]	[1920x1080]	[4096x2160/ 3840x2160]	[1920x1080]
4096x2160	59.94P 50.00P 29.97P 25.00P 24.00P 23.98P	4096x2160 YCbCr 4:2:2, 10 bit	2048x1080 YCbCr 4:2:2, 10 bit	1920x1080 YCbCr 4:2:2, 10 bit	4096x2160[5]	1920x1080, 720x480 (59.94P), 720x576 (50.00P)
3840x2160		3840x2160 YCbCr 4:2:2, 10 bit	1920x1080 YCbCr 4:2:2, 10 bit		3840x2160[5]	
2048x1080		2048x1080 / RGB 4:4:4, 12 or 10 bit[6], YCbCr 4:2:2, 10 bit	2048x1080 YCbCr 4:2:2, 10 bit		1920x1080, 720x480 (59.94P), 720x576 (50.00P)	
1920x1080		1920x1080 / RGB 4:4:4, 12 or 10 bit[6]	1920x1080 YCbCr 4:2:2, 10 bit			
1920x1080	59.94i 50.00i	1920x1080 YCbCr 4:2:2, 10 bit				

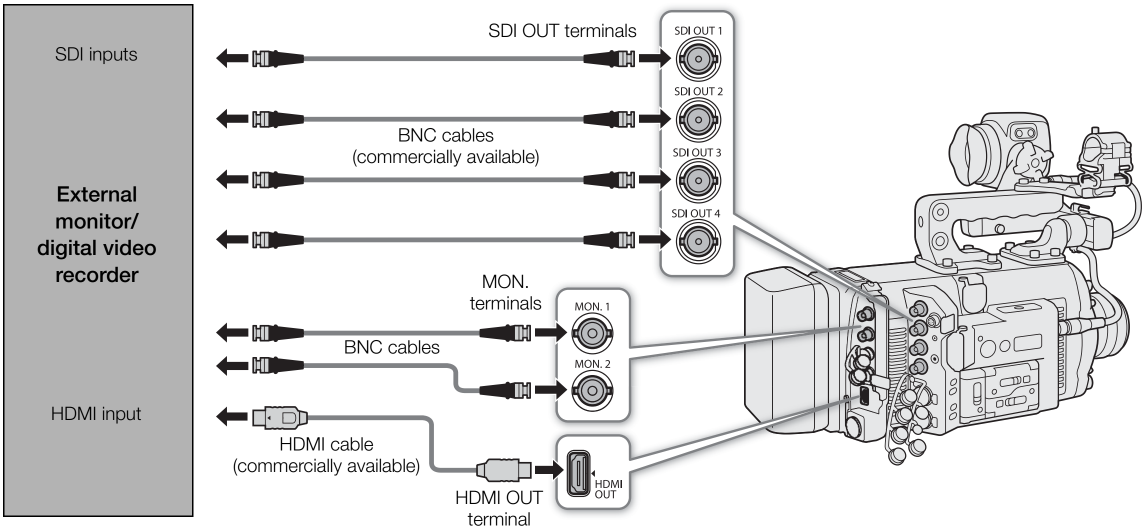
[1] During the playback of sub recording (XF-AVC Proxy) clips, if the output of onscreen displays is activated for the MON. terminals, the onscreen displays will be output also from the SDI OUT terminals.
[2] MENU ▸ [System Setup] > [Term. Output Setup] > [MON. Output] setting.
[3] When MENU ▸ [System Setup] > [Term. Output Setup] > [MON. Output] is set to [Off], the HDMI OUT output will change depending on the capabilities of the monitor used. When [MON. Output] is set to a setting other than [Off], if the monitor connected to the terminal does not support the video output configuration, video output from the HDMI OUT terminal will be turned off.
The color sampling will be set automatically to YCbCr 4:2:2, 10 bit, YCbCr 4:4:4, 8 bit or RGB 4:4:4, 8 bit, depending on the capabilities of the external monitor.
[4] MENU ▸ [System Setup] > [Term. Output Setup] > [HDMI Max Res.] setting.
[5] Only available when MENU ▸ [System Setup] > [Term. Output Setup] > [SDI OUT Output] is set to [Off].
[6] RGB 4:4:4,10 bit is only available when the main recording format is set to [XF-AVC (CFast)].

Connecting to an External Monitor or Recorder

When you connect the camera to an external device, be it a monitor (to monitor the recording or for playback) or an external video recorder (for recording), use the terminal on the camera that matches the one you wish to use on the external device. Then, check the video signal output configuration (📖 149).

Connection Diagram

We recommend that you power the camera from a power outlet using an AC adapter.



Using the SDI OUT Terminals

The digital signal that is output from the SDI OUT terminals includes the video signal, audio signal (4 channels*), time code, metadata and clip file name information**. You can connect an external video recorder to the camera's SDI OUT terminals to record RAW, 4K or 2K video.
For details about how to use and configure external recorders or displays, refer to the instruction manual of the external device used.

* During RAW output, 2-channel 16-bit audio will be output instead (transmitted as 20 bits). You can select which audio channels to output (📖 157).

** If the main recording format is set to [ProRes (CFast)] but no CFast card is inserted in the camera, clip file name information will not be output.

1 To output RAW video, set the main recording format to [RAW (SDI OUT)] (📖 65).

2 Activate the SDI OUT terminals.

MENU/EVF ▸ [System Setup] (🔧) ❯ [Term. Output Setup] ❯ [SDI OUT Output] ❯ [On]

- If you have no intention to use the SDI OUT terminals, select [Off] instead.

3 If necessary, select the 3G-SDI mapping level for the output signal (step 2, 📖 153).

ⓘ NOTES

- Depending on the external recorder, you may not be able to record at the desired video configuration.
- After you connect the camera to the external recorder, make a test recording first to check that audio and video are recorded correctly on the external recorder.

- You can set MENU ▶ [Rec/Media Setup] ❯ [Rec Command] to [On] to use the camera's REC button to control also the recording operation of an external recorder connected to the SDI OUT terminals and MON. terminals.
- **About RAW output:**
  - A special gamma curve optimized for RAW video is applied to the video output.
  - During RAW output, the audio output signal will be 2-channel linear PCM audio (16 bit). We recommend using instead the 4-channel linear PCM audio (24 bit) that is recorded in the camera with sub recording (XF-AVC Intra) clips.
  - The output signal mapping will be set to Level B.
  - RAW output is not available when slow & fast motion recording is activated in crop mode ([On (crop)]).
- When 2K RGB 4:4:4 video is being output from the SDI OUT terminals, video output from the MON. terminals will be a 2K YCbCr video signal.

Using the MON. Terminals

The digital signal that is output from the MON. terminals includes the video signal, audio signal (4 channels), time code, metadata and clip file name information*. Additionally, you can output also the camera's onscreen displays and various assistance displays (onscreen markers, zebra patterns, peaking, magnification, false color display, black & white image).

* If the main recording format is set to [ProRes (CFast)] but no CFast card is inserted in the camera, clip file name information will not be output.

1 Activate the MON. terminals and select the desired output mode.

MENU/EVF ▶ [System Setup] (🔧) ❯ [Term. Output Setup] ❯ [MON. Output] ❯ [1920x1080] or [2048x1080/1920x1080]

- If you have no intention to use the MON. terminals, select [Off] instead.

2 If you selected 2K output, you can select the 3G-SDI mapping level for the output signal.

From the same submenu: [3G-SDI Mapping] ❯ [Level A] or [Level B]

- The options correspond to a video output signal compliant with Level A or Level B of the SMPTE ST 425 standard.

Options

[2048x1080/1920x1080]: Outputs video with a resolution of 2048x1080 or 1920x1080.

[1920x1080]: Outputs 1920x1080 (Full HD) video. When the horizontal resolution of the main recording video configuration is 4096 or 2048, the sides of the image will be displayed letterboxed.

Using the HDMI OUT Terminal

The HDMI™ OUT terminal also offers a digital connection and outputs both a video and audio signal. You can select the maximum resolution of the video signal to output up to 4K video. Additionally, you can output also the camera's onscreen displays and various assistance displays (onscreen markers, zebra patterns, peaking, magnification, false color display, black & white image). The audio output signal will be 2-channel linear PCM audio (16-bit, 48 kHz sampling). You can select which audio channels to output (📖 157).

1 Select the HDMI OUT terminal's maximum resolution.

MENU/EVF ▶ [System Setup] (🔧) ❯ [Term. Output Setup] ❯ [HDMI Max Res.] ❯ [4096x2160/3840x2160] or [1920x1080]

NOTES

- When MENU ▸ [System Setup] ❯ [Term. Output Setup] ❯ [MON. Output] is set to [Off], the HDMI OUT output will change depending on the capabilities of the monitor used. When [MON. Output] is set to a setting other than [Off], if the monitor connected to the terminal does not support the video output configuration, video output from the HDMI OUT terminal will be turned off.
- The HDMI OUT terminal is for output only. Do not connect the camera to another device's output terminal using the HDMI OUT terminal as this will cause a malfunction.
- Correct operation cannot be guaranteed when connecting the camera to DVI monitors.
- Video may not be output correctly depending on the monitor. In such case, use another terminal.

Applying a LUT to Video Outputs

While recording using special gamma curves, you can apply a LUT to video output from the VIDEO terminal (optional viewfinder), SDI OUT terminals, MON. terminals or HDMI OUT terminal. When a LUT is applied, the displayed image will look as if a standard gamma curve and color space were used, making it easier to check the image on the monitoring device used. To check the image on an external monitor, you will need a monitor that is compatible with the selected color space.

Available LUT options by gamma curve and color space

Available LUTs depend on the combination of gamma curve and color space used, whether it was set through one of the preset color settings or through the individual main settings in the custom picture file (□ 134).

[Gamma]	[Color Space]	Available LUTs					
		[BT.709]	[BT.2020]	[DCI]	[HDR-ST 2084]	[ACESproxy]	[ST 2084 Assist.] (1600%/400%)
[Canon Log 2]/[Canon Log 3]	[Cinema Gamut]	●	●	●	●	●*	●
	[BT.2020 Gamut]	●	●	–	●	–	●
	[DCI-P3 Gamut]	●	–	●	–	–	–
	[BT.709 Gamut]	●	–	–	–	–	–
[Canon Log]	[BT.709 Gamut]	●	–	–	–	–	–
[Wide DR]	[BT.2020 Gamut]	●	–	–	–	–	–

* Only when HOME ▸ [COLOR] ❯ [CP MAIN] ❯ [Preset] is set to [Canon Log 2 : C.Gamut] or [Canon Log 3 : C.Gamut].

1 Open the LUT selection submenu.

HOME screen: HOME ▸ [COLOR] ❯ [LUT]
Monitoring menu: EVF ▸ [Monitoring Setup] (▦) ❯ [LUT]

2 Select the desired terminal and then press SET.

- Using the control display, you can also select [SD XF-AVC] to apply a LUT to sub recording (XF-AVC Proxy) clips when the simultaneous sub recording is activated (□ 71). From the monitoring menu select the LUT for XF-AVC Proxy clips with the EVF ▸ [Rec/Media Setup] ❯ [Sub Rec (XF-AVC)] ❯ [Apply LUT] setting instead.

3 Select the desired LUT and then press SET.

- Repeat steps 2 and 3 as necessary to select the LUT applied to other output terminals.
- The gamma curve and color space of the video output will change.
- If a LUT is not needed, select [Off].

Options

Applied LUT	Output Settings with LUT applied		Description
	Gamma curve	Color space	
[BT.709]	Wide DR	BT.709	LUT for viewing on the optional viewfinder and external monitors compatible with BT.709 specifications.
[BT.2020][1]	Wide DR	BT.2020	LUT for viewing on external monitors compatible with ITU-R BT.2020 standards, which define parameters for ultra-high-definition television (4K/8K).
[DCI][1]	DCI	DCI-P3	LUT for viewing on external monitors that support color spaces and gamma curves that follow the guidelines established by DCI (Digital Cinema Initiatives).
[HDR-ST 2084][1, 2]	SMPTE ST 2084	BT.2020	LUT for viewing HDR (high dynamic range) images on external monitors compatible with the SMPTE ST 2084 standard. The signal output will use narrow range (video range) coding.
[ACESproxy][1]	ACESproxy	ACESproxy	LUT for viewing on external monitors compatible with the ACESproxy standard established by ACES (Academy Color Encoding System). The signal output will use full range coding.
[ST 2084 Assist. (1600%)][3], [ST 2084 Assist. (400%)][3]	Original gamma curve	BT.709	LUT for viewing HDR (high dynamic range) images on the optional viewfinder and other monitoring devices. The LUT follows the SMPTE ST 2084 transfer function to convert a brightness range of 1600% or 400% respectively into a linear brightness scale.
[Off]	–	–	No LUT applied.

1 Not available for the VIDEO terminal (optional viewfinder).
2 For the HDMI OUT terminal, this option is only available when MENU ▸ [System Setup] ❯ [Term. Output Setup] ❯ [HDMI Max Res.] is set to [1920x1080].
3 Only available for the VIDEO terminal (optional viewfinder).

NOTES

- When you apply the [ACESproxy] LUT to the SDI OUT terminals, MON. terminals or HDMI OUT terminal, the selected terminal will output ACESproxy video data. Using a compatible monitor*, you can perform on-set color grading and check the image after color correction as you continue shooting (📖 22).
  * When using the HDMI OUT terminal, a monitor that supports full range YCbCr quantization is required.
- If you set an assignable button to [LUT] (📖 127), you can press the button to turn on and off the LUTs applied to all video outputs at once.
- If you change the [Gamma] or [Color Space] settings in the custom picture file (📖 134), all the LUT settings will be reset to [Off].

Superimposing Onscreen Displays on Video Outputs

You can choose to output the camera's onscreen displays along with the video output from the VIDEO terminal (optional viewfinder), MON. terminals or HDMI OUT terminal to show the camera's onscreen displays on monitoring devices connected to the corresponding terminals. This will not affect your recordings or video output from the SDI OUT terminals.

1 Open the [OSD Output] submenu.

MENU/EVF ▸ [Monitoring Setup] (▦) ❯ [OSD Output] ❯ [VIDEO] (optional viewfinder) or [MON.+HDMI] (external monitors) ❯ [Output]

2 Select [On] and then press SET.

- Alternatively, you can press an assignable button set to [OSD Output: VIDEO] (optional viewfinder only), [OSD Output: MON.+HDMI] (external monitors only) or [OSD Output] (all monitoring devices at once) (📖 127).
- DISP➜ appears at the right of the monitoring screen (in shooting mode, only if MENU ▸ [Monitoring Setup] ❯ [Custom Display 2] ❯ [OSD Output] is set to [On]).

NOTES

- When the HDMI OUT terminal's resolution is set to 4096x2160 or 3840x2160, the camera's onscreen displays will not be displayed on the monitor connected to the HDMI OUT terminal.

Audio Output

The camera can output audio from the SDI OUT terminals, MON. terminals, HDMI OUT teminal or 🎧 (headphone) terminal. The audio signal recorded with main recording clips recorded in the camera is 4-channel linear PCM audio, 24 bit. The number of audio channels output and the audio bit depth depend on the terminal used and other settings.

- SDI OUT terminals: During RAW video output: 2 channels*, 16 bit
  During 2K output: 4 channels, 24 bit
- MON. terminals: 4 channels, 24 bit
- HDMI OUT terminal: 2 channels*, 16 bit
- 🎧 (headphone) terminal: 2 channels*

* You can select which two channels of the four audio channels recorded will be output from the terminal.

1 Open the audio channel selection screen/submenu for the desired terminal.

Setup screen: ALT ▸ [AUDIO] ❯ [MONITOR] or
ALT ▸ [AUDIO] ❯ [OPTIONS] ❯ [Audio Output] ❯ [HDMI Channels] or [RAW (SDI) Channels]

Monitoring menu: EVF ▸ [Audio Setup] (♪)) ❯ [Audio Output] ❯ [Monitor Channels], [HDMI Channels] or [RAW (SDI) Channels]

In playback mode: PLAY ▸ MENU ▸ [Audio Setup] ❯ [Monitor Channels] or [HDMI Channels]

- [MONITOR]/[Monitor Channels]: audio from the 🎧 (headphone) terminal; [HDMI Channels]: audio output from the HDMI OUT terminal; [RAW (SDI) Channels]: audio output from the SDI OUT terminals during RAW video output.
- Alternatively, you can press an assignable button set to [Monitor Channels] (📖 127) to cycle among the audio channel output options for the headphone terminal only.

2 Select the desired option and then press SET.

- The options show combinations of audio channels output from the left and right, respectively (L/R). For the headphones output, options with a “+” sign (for example “CH1+2”) indicate a mix of two audio channels output from the same side.
- The audio channels selected for output from the 🎧 (headphone) terminal will appear at the right of the monitoring screen, under the audio level indicators (in shooting mode, only if MENU ▸ [Monitoring Setup] ❯ [Custom Display 2] ❯ [Audio Lvl Indicator] is set to [On]).

Working with Clips on a Computer

Canon offers software applications as free downloads that allow you to save XF-AVC clips recorded with the camera on a computer, develop RAW clips, and more.

Saving Clips to a Computer

You can use Canon XF Utility to save and organize clips on a computer and the Canon XF plugins to easily use the clips directly from major non-linear editing (NLE) applications. The software and plugins are available as free downloads from your local Canon Web site. Check the download page for the system requirements and the latest information about the software and supported non-linear editing (NLE) applications.
You will find detailed instructions about installing and uninstalling the software in the "Read This First" PDF file included in the compressed file you will download from the Web site. For details about using the software, refer to the instruction manual (PDF file) that is installed with the software.

Canon XF Utility: Software application that allows you to save clips on a computer, check, play back and organize clips and grab still frames from clips. The software is available for Windows and Mac OS (OS X).

Canon XF Plugin for Avid Media Access: Plugin that allows you to easily import clips from a recording media or a local folder in the computer to the compatible version of Avid Media Composer (an NLE application compatible with Avid Media Access), directly from within the application. The plugin is available for the Windows and Mac OS (OS X) versions of Avid Media Composer.

Canon XF Plugin for Final Cut Pro X: Plugin that allows you to easily transfer clips from a recording media or a local folder in the computer to the compatible version of Apple's Final Cut Pro X, directly from within the NLE application.

Developing RAW Clips

Use the Cinema RAW Development software to develop RAW clips recorded on an external recorder connected to the camera's SDI OUT terminals. After you develop the clips and export them to a full-quality standard file type such as DPX, they will be ready for color grading. Alternatively, you can use the Canon RAW Plugin to easily use RAW clips unaltered (in RAW format) directly from major non-linear editing (NLE) applications. The software and plugin are available as free downloads from your local Canon Web site. Check the download page for the system requirements and the latest information about the software and supported non-linear editing (NLE) applications.
You will find detailed instructions about installing and uninstalling the software in the "Read This First" PDF file included in the compressed file you will download from the Web site. For details about using the software, refer to the instruction manual (PDF file) that is installed with the software.

Cinema RAW Development: Software application that allows you to develop, play back and export RAW clips that were recorded on an external recorder. The software is available for Windows and Mac OS (OS X).

Canon RAW Plugin for Avid Media Access: Plugin that allows you to easily import RAW clips from a storage device or a local folder in the computer to the compatible version of Avid Media Composer (an NLE application compatible with Avid Media Access), directly from within the application. The plugin is available for the Windows and Mac OS (OS X) versions of Avid Media Composer.

About the Network Functions

You can attach the optional WFT-E6 or WFT-E8 Wireless File Transmitter to the camera to connect it to a Wi-Fi network (📖 160). You can also use an Ethernet cable to connect the camera to a network using a wired connection (📖 164). After the camera is connected to a network, you can use the following network functions.

Network functions and connection types

Network function	Description	Wired network	Wi-Fi		📖
			Infrastructure[1]	Camera Access Point[2]	
Browser Remote	Control the camera remotely from the Web browser of a connected device.	●	–	●	166
IP Streaming	Stream the camera's live video and audio over IP to a compatible IP video decoder connected to the same network.	●	●	–	178
FTP File Transfer	Transfer clips recorded with the camera to another device connected to the network using the FTP protocol.	●	●	–	181

1 Connection to a Wi-Fi network via an external access point (wireless router, etc.)
2 Direct connection to one Wi-Fi-enabled device where the camera serves as the Wi-Fi access point.

Before using the network functions

- The instructions in this chapter assume you already have a correctly configured and working network, network device(s) and/or Wi-Fi access point. If necessary, refer to the documentation provided with the network devices you plan to use.
- Configuring the network settings requires adequate knowledge about configuring and using wired (Ethernet) and/or wireless (Wi-Fi) networks. Canon cannot provide support regarding network configurations.

IMPORTANT

- Data transmitted over networks is not encrypted.
- Canon shall not be liable for any loss of data or damage resulting from incorrect network configuration or settings. Additionally, Canon shall not be liable for any loss or damage caused by the use of network functions.
- Using an unprotected Wi-Fi network can expose your data to monitoring by unauthorized third parties. Be aware of the risks involved.

NOTES

- Do not open the card slot covers of any recording media while using network functions.
- Do not lay cables connected to the SDI OUT terminals, MON. terminal or HDMI OUT terminal near the optional Wireless File Transmitter. Doing so may negatively affect the wireless communication over Wi-Fi.

Connecting to a Wi-Fi Network

Attaching the Optional Wireless File Transmitter

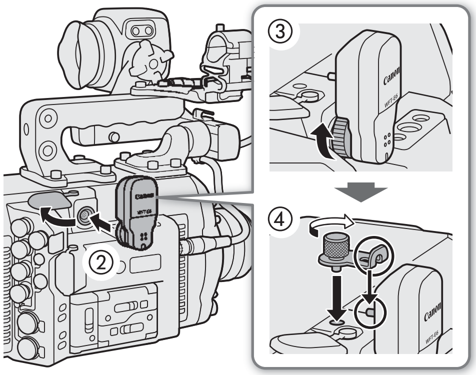
Turn off the camera and attach the optional WFT-E6 or WFT-E8 Wireless File Transmitter (hereafter, simply “wireless transmitter”) to the camera’s system extension terminal.

1 Press the POWER button to turn off the camera.

2 Attach the optional wireless transmitter to the camera’s system extension terminal.

3 Fasten the wireless transmitter’s locking screw.

4 Attach the supplied extension unit attachment bracket to secure the wireless transmitter.



Once the wireless transmitter is correctly attached to the camera, you can connect the camera in Infrastructure mode, using an access point (wireless router etc.), or in Camera Access Point mode, directly to a network device. The type of connection you can use, depends on the network function you wish to use (□ 159).
For an Infrastructure connection, the camera offers 3 ways to configure an access point and the method you use will depend on the type and specifications of the access point and network you plan to use.

Camera Access Point: When shooting in a location where there are no access points available, the camera can serve as a wireless access point*. Wi-Fi enabled devices will be able to connect to the camera directly.

* Limited only to the connection between the camera and supported Wi-Fi enabled devices. The functionality is not the same as that of commercially available access points.

Infrastructure connection:
WPS (button): If your wireless router supports Wi-Fi Protected Setup (WPS), setup will be easy and require minimal configuring and no passwords. To check if your wireless router has a WPS button and for details about how to activate the Wi-Fi protected setup, refer to the instruction manual of your wireless router.

WPS (PIN code): Even if your wireless router does not have a dedicated WPS button, it may support WPS using a PIN code instead. For setup using a PIN code, you will need to know in advance how to activate the wireless router’s WPS function. For details refer to the instruction manual of your wireless router.

Searching for Access Points: If your access point does not support the WPS function or you cannot activate it, you can have the camera search for access points in the area.

IMPORTANT

- Depending on the country/region of use, some restrictions on outdoor use or camera access point connections may apply when operating the IEEE802.11a/n wireless standard in the 5 GHz band. For details see *Areas of Use and Restrictions* (a separate leaflet supplied with the wireless transmitter).

Camera Access Point

In this mode the camera itself serves as a wireless access point to which other Wi-Fi-enabled devices can connect. Initially, basic settings for a Camera Access Point connection are configured in the camera and you can use the default settings to connect immediately to the camera.
Follow the procedure below if you wish to change the settings.

1 **Open the [Browser Remote] setup screen/submenu.**

Setup screen: ALT ▸ [NETWORK] » [Browser Remote]
Monitoring menu: EVF ▸ [System Setup] (🔧) » [Network Settings] » [Browser Remote]

- The current connection configuration appears on the control display. Turn the SELECT dial to scroll through all the connection settings.

2 **Change the connection method.**

Setup screen: [OPTIONS] » [Connection Method]
Monitoring menu: From the same submenu select [Connection Method].

3 **Select [Camera Access Point] and then press SET.**

4 **Change the SSID (network name) the camera will use as a Wi-Fi access point.**

Setup screen: [SSID] » [EDIT]
Monitoring menu: [SSID] » [Input]

- Enter the desired network name using the keyboard screen (📖 37).
- The network name is needed to connect the network device to the camera. If necessary, write it down.

5 **Select the frequency band for the Wi-Fi connection.**

[Frequency] » [5 GHz] or [2.4 GHz] » press SET

6 **Select the Wi-Fi channel.**

[Channel] » desired channel » press SET

- Available channels will be different depending on the wireless connection mode selected in the previous step and the model of wireless file transmitter used. For details, refer to the “Areas of Use and Restrictions” leaflet supplied with the optional WFT-E6 or WFT-E8 Wireless File Transmitter.

7 **Select the encryption method.**

[Authn/Encr Method] » [WPA2-PSK/AES] or [Open/No encryption] » press SET

- If you selected [Open/No encryption], the rest of the procedure is not necessary.

8 **Change the default password.**

Setup screen: Select [Password] and press SET.
Monitoring menu: [Password] » [Input] » press SET

- Enter the desired text using the keyboard screen (📖 37).
- This password is needed to connect the network device to the camera. If necessary, write it down.

Connecting in Infrastructure Mode

1 **Open the [IP Streaming] or [FTP Transfer] setup screen/submenu.**

Setup screen: ALT ▸ [NETWORK] » [IP Streaming] or [FTP Transfer]*
Monitoring menu: EVF ▸ [System Setup] (🔧) » [Network Settings] » [IP Streaming] or [FTP Transfer]**

* The camera will switch automatically to playback mode when you select [FTP Transfer].
** From the playback screen only.

- The current connection configuration appears on the control display. Turn the SELECT dial to scroll through all the connection settings.

2 **Change the connection method.**

Setup screen: [OPTIONS] » [Connection Method]
Monitoring menu: From the same submenu select [Connection Method].

3 **Select [Infrastructure] and then press SET.**

4 **Select the desired method to configure the access mode.**

[Wi-Fi Setup Method] ❯ desired method ❯ press SET

- Continue the setup with the procedure corresponding to the method you wish to use (see the reference pages below).
  [WPS: Button] (📖 162)   [WPS: PIN Code] (📖 162)   [Search for Access Points] (📖 163)

Wi-Fi Protected Setup (WPS)

Wi-Fi Protected Setup (WPS) is the easiest way to set up a Wi-Fi access point. You can do simply by pushing a button (if the access point (wireless router) you want to connect to has a WPS button) or using a PIN code issued by the camera.

Wireless Routers with a WPS Button

1 **Press and hold the WPS button on the wireless router.**

- The length of time required to hold down the WPS button depends on the wireless router. Refer to the instruction manual of your wireless router and make sure the wireless router's WPS function is activated.

2 **Within 2 minutes, press [OK] (setup screen) or press SET (monitoring menu).**

- While [Connecting] appears on the screen, you can press [CANCEL] (setup screen) or press SET (monitoring menu) to cancel the operation.

NOTES

- The [WPS: Button] method may not work correctly if there are several active access points in the area. In such case try using [WPS: PIN Code] or [Search for Access Points] (📖 163) instead.

WPS using a PIN code

1 **After you select [WPS: PIN Code], the camera will generate and display an 8-digit PIN code on the control display.**

2 **Enter the PIN code into the wireless router's WPS (PIN code) setup screen.**

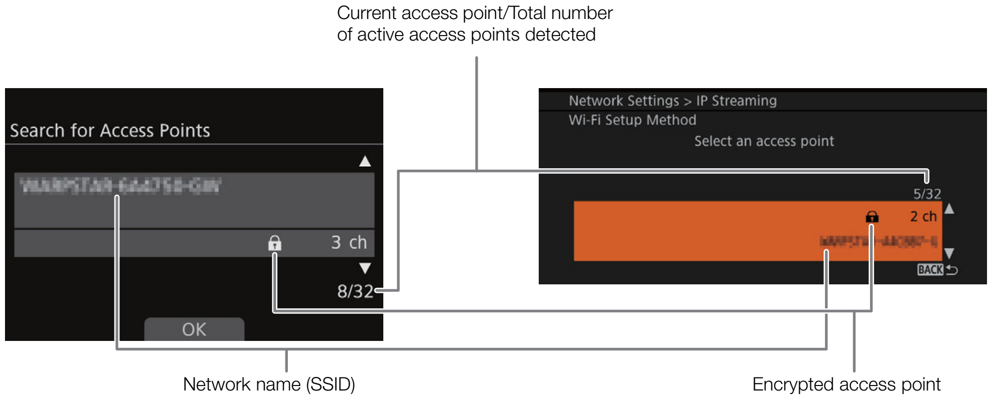
- For most wireless routers, you must use a Web browser to access the setup screen.
- For details about how to access your wireless router's settings and activate the Wi-Fi Protected Setup (WPS) using a PIN code, refer to the instruction manual of your wireless router.

3 **Within 2 minutes, press [OK] (setup screen) or press SET (monitoring menu).**

- While [Connecting] appears on the screen, you can press [CANCEL] (setup screen) or press SET (monitoring menu) to cancel the operation.
- After the connection is correctly established, the previous menu screen will appear again on the control display.

Searching for Access Points

The camera will automatically detect access points in the vicinity. After you select the desired access point, you only need to enter the selected network's password to connect the camera. For details about the access point's network name (SSID) and password refer to the wireless router's instruction manual or consult the network administrator in charge of the access point.



1 After you select [Search for Access Points], the camera will search for active access points in the vicinity and display a list of available options on the control display.

2 Turn the SELECT dial to select the desired access point and then press [OK] (setup screen) or press SET (monitoring menu).

3 Enter the password of the access point.

Setup screen: Select [Password] and press SET.
Monitoring menu: [Password] ❯ [Input] ❯ Press SET

- Enter the desired text using the keyboard screen (📖 37).
- If the access point is not encrypted (🔒), this step is not required.

ⓘ NOTES

Valid passwords vary depending on the encryption method.

64-bit WEP encryption: 5 ASCII characters or 10 hexadecimal characters.

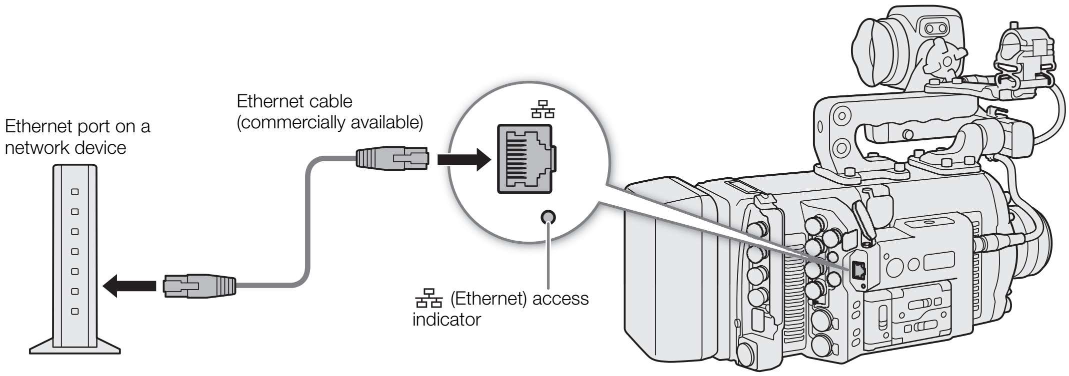
128-bit WEP encryption: 13 ASCII characters or 26 hexadecimal characters.

AES / TKIP encryption: 8 to 63 ASCII characters or 64 hexadecimal characters.

* Note: ASCII characters include the numbers 0 to 9, the letters a to z and A to Z and some punctuation marks and special symbols. Hexadecimal characters comprise the numbers 0 to 9 and the letters a to f and A to F.

Connecting to a Wired (Ethernet) Network

Connect the camera to a router or other device connected to a wired (Ethernet) network using a commercially available Ethernet cable. Use Category 5e, shielded twisted pair (STP) Ethernet cables compatible with Gigabit Ethernet (1000BASE-T) and with good shielding capability.



1 **Connect a commercially available Ethernet cable to the (Ethernet) terminal on the camera and an Ethernet port on a network device.**

2 **Open the [Connection Method] submenu of the desired network function.**

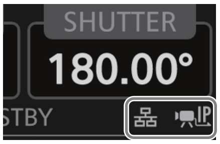
Setup screen: ALT ▸ [NETWORK] ▶ Desired function* ▶ [OPTIONS] ▶ [Connection Method]
Monitoring menu: EVF ▸ [System Setup] () ▶ [Network Settings] ▶ Desired function** ▶ [Connection Method]

* The camera will switch automatically to playback mode when you select [FTP Transfer].
** [FTP Transfer] from the playback screen only.

3 **Select [Ethernet] and then press SET.**

Checking the Network's Status and Settings

After activating a network function, the camera will connect to the network that was configured in advance. The icons displayed on the control display and at the top left of the monitoring screen will indicate the type of network selected and the connection status.





Wi-Fi (Infrastructure): In yellow – the camera is connecting to or disconnecting from the network. In white – the network function can be used.

AP Wi-Fi (Camera Access Point): In yellow – starting the camera's access point. In white – the camera's access point is ready. Connect the Wi-Fi enabled device to the camera.

Ethernet: In yellow – the camera is connecting to or disconnecting from the network. In white – the network function can be used.
The (Ethernet) indicator next to the terminal will flash or illuminate as follows*: Flashing in green – connecting to the network or streaming video (IP streaming only); illuminated in green – Browser Remote or FTP transfer active; flashing in red – network error.

Remote: Browser Remote (166)

IP: IP streaming (178)

* You can also set MENU ▸ [System Setup] ❯ [LED] ❯ [LAN (Ethernet)] to [Off] to disable the indicator.

Checking and Changing Network Settings

The camera's network functions are optimized to work automatically with minimal setup by the user. Still, you have the option to change manually more advanced network settings to suit specific needs. Changing settings manually requires more advanced knowledge of Wi-Fi and network settings.

1 Review the network settings of the desired function.

Setup screen: ALT ▸ [NETWORK] ❯ Desired function* ❯ [OPTIONS]
Monitoring menu: EVF ▸ [System Setup] ( ) ❯ [Network Settings] ❯ Desired function**

* The camera will switch automatically to playback mode when you select [FTP Transfer].
** [FTP Transfer] from the playback screen only.

- The submenu that opens will list all the network settings relevant to the selected network function. Turn the SELECT dial to scroll and review all the information.
- Monitoring menu only: You can select [Display Info] and press SET to view a summary of all the network settings (except for FTP transfer). Push the joystick up/down to view other pages or press SET to return to the previous submenu.

2 Select the network setting you wish to change and press SET.

3 Select an option and press SET or enter the required text/numbers using the keyboard screen (37).

Browser Remote: Controlling the Camera from a Network Device

After connecting the camera to a network (Wi-Fi or wired using the (Ethernet) terminal), you can operate the camera remotely via Browser Remote, a Web browser application that can be accessed using the Web browser on network devices* (via Wi-Fi or with an Ethernet connection). Using Browser Remote, you can check the camera's live view image, control various recording settings, set and change metadata** and add marks to the clip. On the Browser Remote screen, you can also check the remaining recording time on the recording media, power source levels and the camera's time code.

* For details about compatible devices, operating systems, Web browsers, etc., please visit your local Canon Web site.

** XF-AVC clips only.

Setting Up Browser Remote

Initially, basic default network settings for a browser connection (camera ID, user names and passwords) are already saved in the camera*. At default settings, Browser Remote is set up for use by a single user ([Full] – full control user). With the following procedures you can change the default settings, if you prefer.

* To check the settings: ALT ▸ [NETWORK] > [Browser Remote] (camera menu) or EVF ▸ [System Setup] () > [Network Settings] > [Browser Remote] > [Display Info] (monitoring menu).

Camera Settings

You can set a unique camera identification code and designate the port that Browser Remote will use when accessing the camera through a network. The port number (HTTP protocol) used by Browser Remote is usually set to port 80, but you can change it if necessary. The camera ID will appear on the Browser Remote screen, making it easy to identify which camera the application is controlling in case of a multi-camera shooting setup.

1 Open the Browser Remote's settings submenu.

Setup screen: ALT ▸ [NETWORK] > [Browser Remote] > [OPTIONS]
Monitoring menu: EVF ▸ [System Setup] () > [Network Settings] > [Browser Remote]

2 Change the camera ID.

Setup screen: [Camera ID] > [EDIT]
Monitoring menu: [Camera ID] > [Input] > press SET

- Enter the desired text using the keyboard screen (37).

3 If necessary, select [Port No.] and press SET to change the port number using the keyboard screen (37).

- Camera menu only: Press [RESET] to reset the port number to [80].

User Settings

A user name and password are required before the Browser Remote application can access and operate the camera. You can set up to three different users and select whether you want to allow single-user operation (full control) or two-user operation (one controlling camera functions and another in charge of metadata input for XF-AVC clips).

[Full]	Can access all 3 Browser Remote screens: [] (main recording screen), [] (metadata screen) and [] (basic screen).
[Camera]	Can access only the [] (main recording) screen. This would be the main operator controlling the camera.
[Meta]	Can access only the [] (metadata) screen. This would be the person in charge of keeping the XF-AVC clip information up to date.

1 Open the Browser Remote's settings submenu.

Setup screen: ALT ▸ [NETWORK] > [Browser Remote] > [OPTIONS]
Monitoring menu: EVF ▸ [System Setup] () > [Network Settings] > [Browser Remote]

2 Select the number of Browser Remote users.

[Users Settings] ❯ [One User (Full Control)] or [Two Users (Camera/Meta)] ❯ press SET

- If you selected [One User (Full Control)], perform steps 3 and 4 for the [Full] user. If you selected [Two Users (Camera/Meta)], repeat steps 3 and 4 twice, once for the [Camera] user and once for the [Meta] user.

3 Change the user name.

Setup screen: [Full: User Name] / [Camera: User Name] / [Meta: User Name] ❯ [EDIT]
Monitoring menu: [Full: User Name] / [Camera: User Name] / [Meta: User Name] ❯ [Input] ❯ Press SET

- Enter the desired text using the keyboard screen (📖 37).

4 Change the default password.

Setup screen: Select [Full: Password] / [Camera: Password] / [Meta: Password] and press SET.
Monitoring menu: [Full: Password] / [Camera: Password] / [Meta: Password] ❯ [Input] ❯ Press SET

- Enter the desired text using the keyboard screen (📖 37).

Starting Browser Remote

After connecting the camera to the network, you can start the Browser Remote application on the Web browser* of any network device** connected to the same network.

* A Web browser that supports JavaScript and is enabled to accept cookies is required.
** For details about compatible devices, operating systems, Web browsers, etc., please visit your local Canon Web site.

Preparations on the camera

1 Activate Browser Remote on the camera.

Setup screen: ALT ▸ [NETWORK] ❯ [Browser Remote] ❯ [ACTIVATE] (set it to [On])
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Network Settings] ❯ [Browser Remote] ❯ [Activate] ❯ [On]

- With Camera Access Point connections, the camera will start functioning as a wireless access point. With Ethernet connections, connect the camera to the desired network.
- Remote and the connection type icon will appear on the HOME screen and at the top left of the monitoring screen. When the icons turn white, the camera is ready to accept commands from the Browser Remote application.

2 If necessary, you can check the network settings while Browser Remote is activated.

Setup screen: ALT ▸ [NETWORK] ❯ [Browser Remote]
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Network Settings] ❯ [Browser Remote] ❯ [Display Info]

- Turn the SELECT dial to check all the settings. You will need the camera's SSID (network name) and password to connect a Wi-Fi device using a Camera Access Point connection. You will need the camera's URL and user names/passwords for the Browser Remote users to use the Browser Remote application.
- Only default passwords are displayed. Passwords set by the user will not be displayed (the information screen will show only whether a password is set or not).

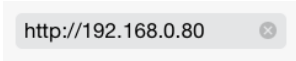
On the connected network device

1 Connect the network device to the camera.

- On Wi-Fi devices select the camera's SSID (network name) in the Wi-Fi settings. With Ethernet connections, connect the device to the same access point as the camera.

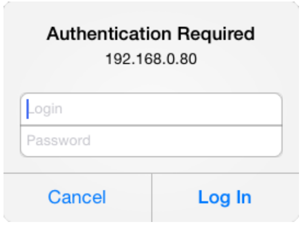
2 Start the Web browser on the network device.

3 Enter the camera's URL exactly as shown on the Browser Remote information screen.

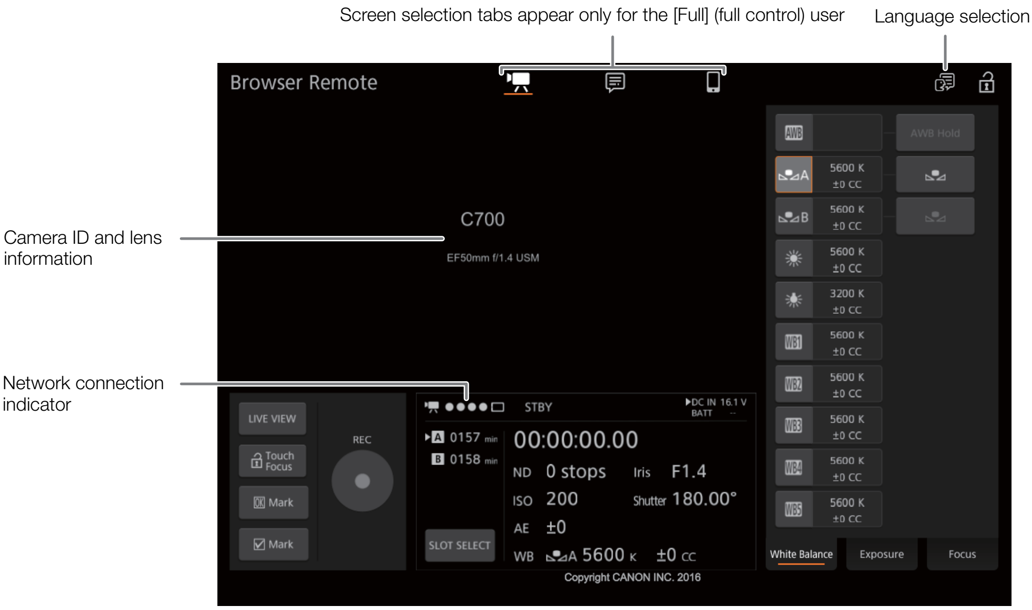


4 Enter the user name and password.

- Be sure to log in with the user name and password of one of the users that were set on the camera (📖 166). If necessary, consult the administrator who configured the camera's settings.
- The Browser Remote screen will appear. The screen displayed will differ depending on the user information used to log in.
- While Browser Remote is correctly connected to the camera, the network connection indicator's ●●●● will turn on one by one and then turn off in an endless loop.
- The camera's ID and lens information will appear on the Browser Remote screen while live view is not activated.



Example of the login screen. The screen may differ depending on the Web browser and version used.



5 Select the language for Browser Remote.

- Click/touch [ ] and select the desired language from the list. Most buttons and controls emulate physical controls on the camera and are labeled in English only, regardless of the language selected.

6 Use the Browser Remote controls to operate the camera.

- Descriptions of the controls are given in the following pages. Detailed operation is given in each function's reference page.



7 When you have finished using Browser Remote, turn it off on the camera

Setup screen: **ALT** ▸ [NETWORK] ❯ [Browser Remote] ❯ [ACTIVATE] (set it to [Off])
Monitoring menu: **EVF** ▸ [System Setup] ( ) ❯ [Network Settings] ❯ [Browser Remote] ❯ [Activate] ❯ [Off]

- The network icons will turn yellow and then disappear from the HOME screen and monitoring screen and the connection with the application will be terminated.

NOTES

- The live view image will not be displayed in Browser Remote in the following cases.
  - While color bars are displayed on the camera.
  - When magnification is activated while recording.
- Depending on the network used and the strength of the Wi-Fi signal (for Wi-Fi connections), you may notice delays in the refreshing of the live view image and other settings.

Using Browser Remote

The Browser Remote application has 3 screens: [] the main screen for controlling the camera remotely in recording mode, [] the metadata screen, and [] a basic screen that allows users only to start/stop recording using a smartphone or other device with a small screen. The screen displayed will differ depending on the user information used to log in.
The following sections explain how to use the Browser Remote controls. For detailed information and applicable restrictions about the functions themselves, please refer to each function's explanation.

NOTES

- Browser Remote does not support multi-touch gestures.

The Main Remote Recording Screen [ ]

* [Full]/[Camera] users only.

When using a computer, tablet and other devices with larger screens, this screen offers all the controls available for operating the camera remotely via Browser Remote.



* Onscreen display/indication only. The content or value cannot be changed using Browser Remote.

1 Live view screen

Shows the camera's live view image. When the live view image is not turned on, the camera ID and lens information will appear here.

2 Status indicators

●●●● ☐:	Wi-Fi connection indicator. While Browser Remote is correctly connected to the camera, the dots will keep turning on and off in a loop.
STBY, etc. :	Recording operation (same as on the camera, 57).
STBY➡, REC➡:	Output recording command (189).
D:	Appears during double slot recording (52).
DC IN 00.0V, BATT 00.0V:	Camera's power source (DC IN and battery) (26). The power source currently in use is indicated with a ▶ mark.

3 [LIVE VIEW] button

Touch the button to display the camera's live view image on the Browser Remote screen.

4 [Touch Focus] button

Touch the button to unlock (enable) the touch focus mode.

5 Clip marks buttons

When recording, you can tag important clips by adding clip marks (117).

To add a clip mark: After recording a clip, touch [OK Mark] to add an OK mark to the clip, or [✓ Mark] to add a ✓ mark to the clip. When the [OK Mark] or [CHECK Mark] message appears, touch ✕.

NOTES

- Depending on the Wi-Fi connection's strength, there may be delay of 0.5 seconds or more between the frame shown when you touch the button and the frame to which the camera adds the shot mark.

6 Browser Remote screen selection ([Full] user only)

Touch [ ] to open the main remote recording screen, [ ] to open the metadata screen (176) or [ ] to open the basic screen for devices with a small screen (175).

7 Language selection

Changes the language used for controls in the [ ] (metadata input) screen and for error messages. Still, most of the application's controls emulate physical buttons on the camera and appear in English only, regardless of the language selected.

8 Key lock button

Touch the icon to lock the Browser Remote screens in order to prevent settings from being changed inadvertently.

9 [REC] button

Touch the button to start recording. While recording, the center of the button turns red.

Touch the button again to stop recording.

10 Recording media selection and approximate remaining recording time

The currently selected CFast card is indicated with a ▶ mark next to the icon.

Remaining recording times are approximate and calculated based on the current video configuration used.

11 [SLOT SELECT] button

Touch the button to select the other CFast card when both CFast card slots contain a CFast card.

12 Current camera settings

This panel displays an overview of the camera settings currently used. You can change camera settings with the controls in the detailed camera settings panel (14) on the right.

[ND]: ND filter	[WB]: White balance
[ISO]/[Gain]: ISO speed or gain value	[Iris]: Aperture (F value or T value)
[AE]: AE shift	[Shutter]: Shutter speed

13 Time code (same as on the camera)

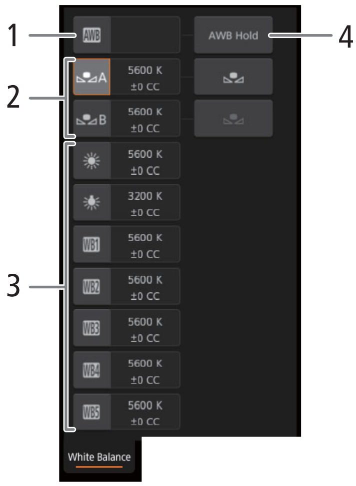
14 Detailed camera settings panel (□ 171)

Touch one of the tabs at the bottom to select the camera settings you wish to adjust:

[White Balance]:	White balance mode and related settings.
[Exposure]:	Exposure related settings –aperture, shutter speed and ISO/speed gain–.
[Focus]:	Focus related settings.
[Zoom]:	Zoom operation (only when using a compatible lens) (□ 221).

The Main Remote Recording Screen: Detailed Camera Settings

The following sections explain how to use the controls in the detailed camera settings panel. For detailed information and applicable restrictions about the functions themselves, please refer to each function's explanation.



To change the white balance

Touch the [White Balance] tab in the detailed camera settings panel.

1 Auto white balance button

Touch [AWB] to set the camera to auto white balance (AWB) mode.

2 Custom white balance buttons

Touch [A] or [B].

To register a custom white balance: Point the camera at a gray card or white object with no pattern so it fills the center of the monitoring/live view screen and touch [ ]. Use the same lighting conditions you plan to use when recording.

During the procedure, the icon in the button will flash quickly. When it stops flashing, the procedure is completed and the custom white balance will be applied.

3 Preset and user-set white balance settings

Touch a button to apply the corresponding white balance settings as shown in the button.

4 [AWB Lock] button

When auto white balance is activated, touch the button to lock the current white balance settings and keep them when you change the subject.

To adjust the color temperature or color compensation (CC) value

Select a white balance setting other than [AWB], [A] or [B].

.

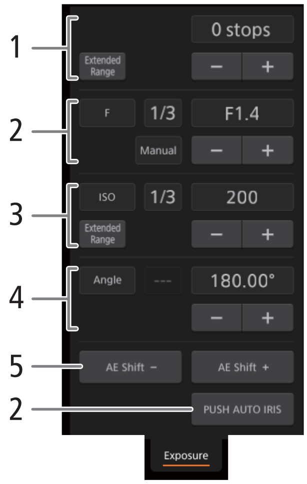
1 Touch the right part of the white balance button (current color temperature and CC value).

2 Touch the [K] tab (color temperature) or [CC] tab (color compensation value) and select the desired value from the list.

- If necessary, repeat this step to adjust the other setting.

To change exposure related settings

Touch the [Exposure] tab in the detailed camera settings panel.



1 ND Filter buttons
- To use the extended ND range options (8 or 10 stops), touch [Extended Range].
- Touch [–] or [+] to change the density of the ND filter (displayed above the buttons). You can also touch the current ND filter setting and select the desired setting from a list of options.

2 Aperture related buttons (only when using a compatible lens, 221)
- To let the camera adjust the aperture automatically, touch [Manual] and select [Automatic] instead. No further settings are necessary.
  To adjust the aperture manually, select [Manual] and use the aperture-related controls as described below.
- To change the adjustment increment, touch [1/3] and select the desired iris increment ([1/2], [1/3], [1/2 Fine] or [1/3 Fine]). With [1/2 Fine] or [1/3 Fine] you can use the smallest aperture increment allowed by the lens. (However, the aperture value displayed will be the closest value in the selected increment scale.)
- Touch [–] or [+] to change the aperture value (displayed above the buttons). You can also touch the current aperture value and select the desired value from a list of options.
- Only when using a compatible EF Cinema lens: To display the aperture values as T values instead of F values, touch [F] and the select [T]. Select [F] to return the display to F values.

NOTES
- During manual aperture adjustment, you can also touch [PUSH AUTO IRIS] to have the camera adjust the aperture automatically once. (The manual aperture buttons will not be available at this time.)
- When using an EF Cinema lens with the built-in extender function activated or a broadcast lens, you cannot change the aperture by selecting an aperture value.

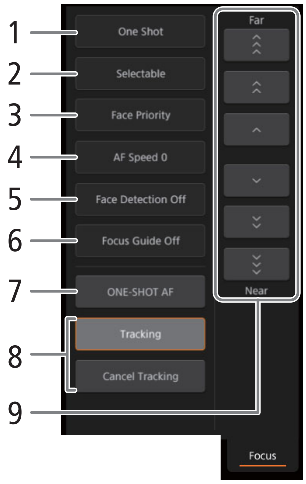
3 ISO speed/Gain related buttons

ISO speeds are displayed by default. To adjust the gain instead, touch [ISO] and select [Gain].
- To use the ISO speeds/gain values in the extended range, touch [Extended Range].
- To change the adjustment increment, touch [1/3] (ISO speed) or [Normal] (gain) and select the desired ISO increment ([1/3] or [1]) or gain increment ([Normal] or [Fine]).
- Touch [–] or [+] to change the ISO speed/gain value (displayed above the buttons). You can also touch the current ISO speed/gain value and select the desired value from a list of options.

4 Shutter speed related buttons
- To change the shutter speed mode, touch [Angle] and select the desired shutter speed mode ([Speed] (standard shutter speed), [Angle], [Clear Scan], [Slow] (slow shutter speeds), or [Off]).
- To change the adjustment increment if you selected [Speed], touch [1/3] and select the desired increment ([1/3] or [1/4]).
- Touch [–] or [+] to change the shutter speed (displayed above the buttons). You can also touch the current shutter speed value and select the desired value from a list of options. You can also change the shutter speed mode with the tabs at the top of the list of shutter speed values.

5 AE shift buttons

Touch [AE Shift –] or [AE Shift +] to change the AE shift level.



To adjust the focus and use focus-related functions

Touch the [Focus] tab in the detailed camera settings panel. To use the following functions, make sure that the focus mode on the lens is set to automatic (🕮 89).

- If the focus mode on the lens is set to manual, you will not be able to use Browser Remote to control the focus. Depending on the lens used, remote operation may not work correctly.

1 AF mode button

2 AF frame position button

Touch the button to select the position of the AF frame. Select [Center Frame] for a fixed AF frame at the center of the live view screen, or [Selectable] to be able to touch the live view screen to select where to focus (🕮 174).

3 Face AF mode button

Touch the button to select how the camera will focus when the Face AF function is activated and no face is detected (🕮 96).

4 [AF Speed] button

Touch the button to select the adjustment speed of applicable lenses when using autofocus functions.

5 [Face Detection] button

6 [Focus Guide] (Dual Pixel Focus Guide function) button

7 [ONE-SHOT AF] button (🕮 173) / [AF Lock] button (🕮 174)

8 Tracking buttons

9 Manual focus buttons

Manual focus

1 Touch the AF mode button and select [One Shot].

2 Touch one of the manual focus buttons on the [Near] side to focus closer or one of the controls on the [Far] side to focus farther away. There are three levels of adjustment - [˄]/[˅] is the smallest and [⩓]/[⩔] the largest.

C700 Focus Guide

1 Touch the [Focus Guide] button.

2 Touch [On] to display the focus guide (🕮 90).

- Only one focus guide frame can be displayed on the Browser Remote live screen. If the focus guide is activated and the secondary focus guide frame is activated on the camera, the face detection and tracking functions cannot be used.

C700 One-shot AF

1 Touch the AF mode button and select [One Shot].

2 Touch the [ONE-SHOT AF] button.

- A white AF frame will appear on the live view screen and the camera will focus automatically.
- When correct focus has been achieved, the AF frame turns green. If the camera cannot focus automatically, the AF frame will turn red.
- When the AF frame position is set to [Selectable], you can touch inside the live view screen to select where to focus (🕮 174).
- If necessary, touch [AF Speed] to change the adjustment speed of the autofocus function.

C700 AF-Boosted MF

1 Touch the AF mode button and select [AF-Boosted MF].
- When the focus is in the manual adjustment range, a yellow focus frame will appear on the live view screen.
- When the AF frame position is set to [Selectable], you can touch inside the live view screen to select where to focus (174).

2 Touch one of the manual focus buttons to focus closer ([Near] side) or farther ([Far] side) as necessary.
- When the focus enters the automatic adjustment range, the focus frame will turn white and the camera will then finish focusing automatically.
- If necessary, touch [AF Speed] to change the adjustment speed of the autofocus function.

C700 Continuous AF

1 Touch [AF Speed] to change the adjustment speed of the autofocus function.

2 Touch the AF mode button and select [Continuous].
- A white AF frame will appear on the live view screen and the camera will focus automatically.
- When the AF frame position is set to [Selectable], you can touch inside the live view screen to select where to focus (174).
- During continuous AF mode, the [ONE-SHOT AF] button will change to [AF Lock]. Touch the [AF Lock] button to lock the focus at its current position and frame the picture as necessary. Touch the button again to release the AF lock.

C700 Touching the screen to focus on a subject

You can touch on a subject that appears in the Browser Remote's live view screen in order to select it for focusing.

1 Touch the AF frame position button and select [Selectable].

2 Make sure the touch focus function has been unlocked and the 🔓 icon appears in the button (170).

3 Touch the desired subject in the live view screen.
- Depending on the focus mode used, a frame may appear on the selected subject and the camera may also focus on the subject automatically and even start tracking the subject.

C700 Face AF

When the face detection function is activated, the camera will detect people's faces and track the main subject even when it moves. You can use face detection with one of the autofocus functions to let the camera focus on the main subject automatically (Face AF).

1 Touch [Face Detection] and select [On].

2 If necessary, touch the Face AF mode button and select [Face Only] or [Face Priority].
- A face detection frame will appear on the live view screen around all detected faces. The main subject is indicated with arrows (◀▶) on the sides. The camera will track the main subject as it moves.
- Touch on the face of a different subject to select it as the main subject.
- During continuous AF, the camera will keep focusing on the main subject's face. During one-shot AF, the camera will focus on the main subject's face when you touch [ONE-SHOT AF].

C700 Tracking other subjects

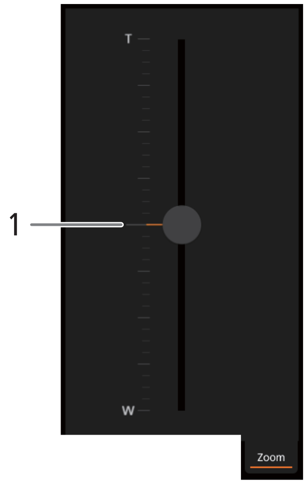
In addition to Face AF, you can have the camera track other moving subjects that are not faces and also combine the tracking function with one of the autofocus functions to let the camera focus on the desired subject automatically.

1 Touch [Tracking].

2 Touch the live view screen to select the subject you wish to track.
- A tracking frame will appear on the live view screen and the camera will track the subject as it moves.
- During continuous AF, the camera will keep focusing on the selected subject. During one-shot AF, the camera will focus on the selected subject when you touch [ONE-SHOT AF].
- Touch [Cancel Tracking] to select a different subject, or touch [Tracking] again to end the tracking function.

To adjust the zoom

The zoom can be adjusted only when a compatible EF Cinema lens (📖 221) is attached to the camera. Touch the [Zoom] tab in the detailed camera settings panel.



1 **Zoom slider**
Drag the zoom slider up/down to zoom in [**T**] or out [**W**], respectively.

NOTES
- If you operate the zoom slider slowly it may take some time until the lens starts moving.

The Basic Screen [📱]

* [Full] users only.

When using a smartphone or other device with a smaller screen, this screen offers only a small live image screen for final confirmation and the [REC] button to start and stop recording.



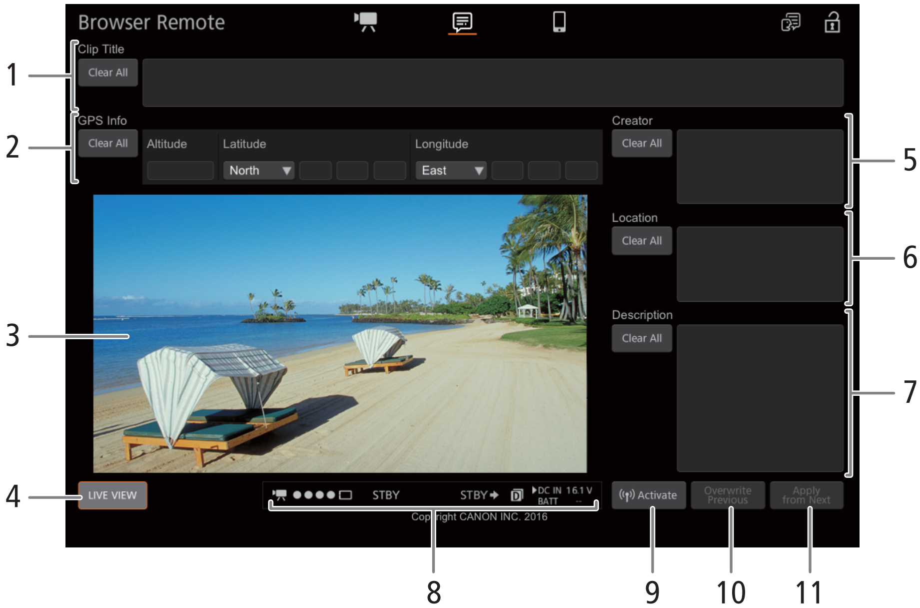
To open the basic screen, touch the [📱] icon at the top of the Browser Remote screen.

The Metadata Screen [Metadata icon]

* [Full]/[Meta] users only.

Using Browser Remote you can create, edit and transfer to the camera a metadata profile that can be embedded with the recorded XF-AVC clips. This metadata profile includes the user memo information (clip title, creator, location and description), as well as GPS information. For details, refer to *Using Metadata* (118).

To open the metadata screen, touch the [Metadata icon] icon at the top of the Browser Remote screen.



1 Clip title
Touch inside the text box and enter the desired text. To delete the text, touch [Clear All].

2 GPS information
To enter the altitude: Touch inside the [Altitude] text box and enter the desired value.
To enter the latitude: Touch inside one of the text boxes under [Latitude] and enter (from left to right) the degrees, minutes and seconds values. To select a southern latitude, touch [North] and select [South] instead.
To enter the longitude: Touch inside one of the text boxes under [Longitude] and enter (from left to right) the degrees, minutes and seconds values. To select a western longitude, touch [East] and select [West] instead.
- Touch [Clear All] to delete all the GPS-related fields at once.

3 Live view screen
Shows the camera's live view image. When the live view image is not turned on, the camera ID and lens information will appear here.

4 [LIVE VIEW] button
Touch the button to display the camera's live view image on the Browser Remote screen.

5 Clip's creator

6 Recording location

7 Description of the clip
Touch inside the text box and enter the desired text. To delete the text, touch [Clear All].

8 Status indicators

See the descriptions in the section about the [ ] screen (170).

9 [Activate] button

Touch the button to give priority to the metadata entered in this screen when recording XF-AVC clips. This overrides the metadata read from a file saved on the SD card.

10 [Overwrite Previous] button/[Overwrite] button

While recording an XF-AVC clip: Touch [Overwrite] to send the metadata entered in this screen to the camera, replacing any metadata that the clip being recorded might have. When the confirmation message appears, touch .

After recording a clip an XF-AVC clip: Touch [Overwrite Previous] to send the metadata entered in this screen to the camera, replacing any metadata embedded in the last clip recorded. When the confirmation message appears, touch .

11 [Apply from Next] button

Touch the button to send the metadata entered in this screen to the camera so it is embedded only with XFHAVC clips that are recorded after the transfer. When the confimation message appears, touch . This option does not overwrite the metadata of clips already recorded or being recorded.

NOTES

- The metadata sent to the camera from Browser Remote will be lost in the following cases.
  - If the camera was turned off.
  - If the MENU ▸ [Rec/Media Setup] [Metadata] [Setting] setting was changed.
- Using Browser Remote ([Activate] button), you can give priority to metadata sent from the application. However, you cannot return the priority back to the SD card. To use a user memo file saved on the SD card you will need to set MENU ▸ [Rec/Media Setup] [Metadata] [Setting] to [SD Card] on the camera itself.
- Metadata sent to the camera from Browser Remote will not be added to relay clips recorded before the switch to the current CFast card.

IP Streaming

When the main recording mode is set to [XF-AVC (CFast)], after you connect the camera to a network (Wi-Fi (Infrastructure) or wired (Ethernet)), you can stream the camera's live video and audio* over IP to a compatible IP video decoder** connected to the network. You can use IP streaming for live broadcasts or to send a news flash report from a location with poor network connectivity, since the configuration of streamed video is lower (so the data to be transferred is smaller) than that of recorded clips.

* Only 2 channels. When recording main recording clips with 4 audio channels, you can select which two channels to stream over IP.

** This can be a dedicated video transfer device or decoder software on a computer. For details about compatible decoders, please visit your local Canon Web site.

Configuration of video streamed over IP

Main recording resolution and frame rate	Streamed signal				
	Video			Audio	
	Bit rate (VBR)	Resolution	Frame rate	Format	Bit rate
3840x2160 (59.94P or 50.00P) 1920x1080 (59.94P, 59.94i, 50.00P, 50.00i)	9 Mbps	1920x1080	59.94i, 50.00i	MPEG-2 AAC 2ch	256 Kbps
	4 Mbps	1920x1080			
	2 Mbps	1280x720	29.97P, 25.00P		
	1.5 Mbps	720x480	59.94i		
		720x576	50.00i		

Preparations

Before you can stream video over IP, you need to configure settings related to the transfer like the protocol and port number to use. You can also select the configuration of the streamed video.

Camera and Receiver Settings

1 Connect the camera to a network.

- Use an Ethernet network (🕮 164) or a Wi-Fi network in Infrastructure mode (🕮 161).

2 Open the IP streaming settings submenu.

Setup screen: ALT ▸ [NETWORK] > [IP Streaming] > [OPTIONS]
Monitoring menu: EVF ▸ [System Setup] (🔧) > [Network Settings] > [IP Streaming]

3 Select the video configuration for the video streamed over IP.

[Video Output Conf.] > Desired option > Press SET

4 Select the audio channels for the IP stream.

[Audio Out Channels] > [CH1/CH2] or [CH3/CH4] > Press SET

5 Select the protocol to be used.

[Protocol] > Desired option > Press SET

- If you selected [RTP+FEC], complete the error correction settings with the following procedure (🕮 179).
- If you selected [RTSP+RTP], configure the RTSP user name and password with the following procedure (🕮 179). Otherwise, continue this procedure to configure the receiver's settings.

6 Select [Dest. IP Address] and then press SET.

- Enter the IP address using the keyboard screen (🕮 37).
- Setup screen only: Press [RESET] to reset the IP address to [0.0.0.0].

7 If necessary, select [Dest. Port No.] and press SET.

- Enter the port number using the keyboard screen (🕮 37).

- Setup screen only: Press [RESET] to reset the port number to [5000].
- Using the default port is recommended.

Options

[UDP]:	This protocol prioritizes transfer speeds but does not guarantee the reliability/integrity of the data. Lost or delayed IP packets are ignored.
[RTP]:	Standard protocol for video/audio broadcasts over the Internet. Lost or delayed IP packets are ignored.
[RTP+FEC]:	This setting uses the RTP protocol and adds a layer of FEC error correction so the receiving side* can recover lost or delayed IP packets. This combination is more common for broadcasts over Wi-Fi networks.
[RTSP+RTP]:	This setting uses the RTSP (real time streaming) protocol to control the streaming server (camera) in real time and the RTP protocol for the broadcast over IP. With the RTSP protocol, the receiver can control when to start and stop the broadcast.

* A decoder compatible with FEC error correction is required.

FEC Error Correction Settings

From the same IP streaming [Options] submenu (setup screen) or [IP Streaming] submenu (monitoring menu) as the main procedure (📖 178).

1 Select [FEC Port No.] and then press SET.
- Enter the port number using the keyboard screen (📖 37).
- Setup screen only: Press [RESET] to reset the port number to [5002].

2 Select the FEC interval to be used.
- [FEC Interval] ❯ Desired value ❯ Press SET

RTSP Settings

From the same IP streaming [Options] submenu (setup screen) or [IP Streaming] submenu (monitoring menu) as the main procedure (📖 178).

1 Change the default user name for the RTSP function.

Setup screen: [RTSP: User Name] ❯ [EDIT]
Monitoring menu: [RTSP: User Name] ❯ [Input] ❯ Press SET
- Enter the desired text using the keyboard screen (📖 37).

2 Change the default password in the same way.

Setup screen: Select [RTSP: Password] and press SET.
Monitoring menu: [RTSP: Password] ❯ [Input] ❯ Press SET

Streaming Video over IP

1 Connect the decoder to the network and complete any necessary configurations on the receiving side so the decoder is ready to receive video over IP.
- For details refer to the instruction manual of the decoder device or software you will use.

2 Connect the camera to a network.
- Use an Ethernet network (📖 164) or a Wi-Fi network in Infrastructure mode (📖 161).

3 Activate IP streaming on the camera.

Setup screen: ALT ▸ [NETWORK] ❯ [IP Streaming] ❯ [ACTIVATE] (set it to [On])
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Network Settings] ❯ [IP Streaming] ❯ [Activate] ❯ [On]

- IP and the connection type icon will appear on the HOME screen and at the top left of the monitoring screen. When the icons turn white, the camera will start streaming video over the selected network.
- You can press the REC button to record clips (XF-AVC only) while streaming video.
- If the main recording video configuration used does not support IP streaming, a message will appear asking you to change the video configuration. The video configuration you select will be saved as the main recording video configuration and will be used even after you finish IP streaming.

4 When using the [RTSP+RTP] protocol, connect the RTSP controller (IP decoder or computer) to the camera's IP stream. If necessary, you can check the network settings while IP streaming is activated.

Setup screen: ALT ▸ [NETWORK] ❯ [IP Streaming]
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Network Settings] ❯ [IP Streaming] ❯ [Display Info]

- Turn the SELECT dial to check all the settings. You will need the IP stream's URL and the RTSP user name and password.
- Only the default password is displayed. Passwords set by the user will not be displayed (the information screen will show only whether a password is set or not).

5 When you have finished streaming the desired video, turn off the IP streaming on the camera.

Setup screen: ALT ▸ [NETWORK] ❯ [IP Streaming] ❯ [ACTIVATE] (set it to [Off])
Monitoring menu: EVF ▸ [System Setup] (🔧) ❯ [Network Settings] ❯ [IP Streaming] ❯ [Activate] ❯ [Off]

- The network icons will turn yellow and then disappear from the HOME screen and monitoring screen.

NOTES

- Except when using the RTSP protocol, while IP streaming is activated, the camera will continue to broadcast video and audio data over the IP network, regardless of the status of the receiver. The streamed data is not encoded. Be careful to set up the correct IP address and test in advance that the receiving decoder can indeed receive the signals.
- Depending on the network used and the connection conditions, you may experience lost or delayed IP packets.
- IP streaming is not available in the following cases.
  - When the main recording frame rate is set to 23.98P.
  - When slow & fast motion recording is activated.

FTP File Transfer

You can transfer sub recording clips (XF-AVC Proxy) from the camera to another device connected to the network, using the FTP protocol.
The following explanations assume that the FTP server is on, ready and correctly configured.

Preparations

Before you can transfer XF-AVC Proxy clips to a connected device, you need to configure the FTP server settings and other settings related to the handling of folders and files. If necessary, consult the network administrator in charge of the FTP server.

FTP Server and Transfer Settings

1 Connect the camera to a network.
- Use an Ethernet network (🕮 164) or a Wi-Fi network in Infrastructure mode (🕮 161).

2 Open the FTP transfer settings submenu.

Setup screen: ALT ▸ [NETWORK] ❯ [FTP Transfer]* ❯ [OPTIONS]
Monitoring menu: PLAY▸EVF ▸ [System Setup] (🔧) ❯ [Network Settings] ❯ [FTP Transfer]
* The camera will switch automatically to playback mode when you select [FTP Transfer].

3 Enter the destination FTP server.

Setup screen: [FTP Server] ❯ [EDIT]
Monitoring menu: [FTP Server] ❯ [Input] ❯ press SET
- Enter the FTP server's IP address or host name using the keyboard screen (🕮 37).

4 Enter the [FTP: User Name], [FTP: Password], and [Destination Folder] in the same way.

5 Select [Port No.] and press SET to change the port number.
- Enter the port number using the keyboard screen (🕮 37).
- Setup screen only: Press [RESET] to reset the port number to [21].

6 Select whether to activate the passive mode.

[Passive Mode] ❯ [On] or [Off] ❯ Press SET
- [Off] is the standard setting for most cases. [On] (passive mode) is more appropriate for FTP transfers within a network behind a firewall.

7 Select whether to create a new folder for every recording date.

[New Folder by Date] ❯ [On] or [Off] ❯ Press SET

8 Select how to handle file transfers when a file with the same name already exists on the server.

[Same Named Files] ❯ Desired option ❯ Press SET

Options for [New Folder by Date]

[On]: A new subfolder under the transfer destination folder "YYYYMMDD\HHMMSS" will be created for every transfer operation.

[Off]: All the files will be transferred to the folder set as [Destination Folder] in the FTP server settings.

Options for [Same Named Files]

[Skip]: If a file with the same name already exists in the destination folder, the file will not be transferred.

[Overwrite]: Even if a file with the same name already exists in the destination folder, the file will be transferred, overwriting any file with the same name in the destination folder.

Transferring Clips (FTP Transfer)

After connecting the camera to a network (Wi-Fi (Infrastructure) or wired (Ethernet)), you can transfer to the FTP server, XF-AVC Proxy clips recorded on the SD card.

1 **Open the PLAY screen for sub recordings (XF-AVC Proxy) on the SD card.**
PLAY ▸ [PB MEDIA] ❯ [SD Card (XF-AVC)]

2 **Open the clip selection screen.**
[OPTIONS] ❯ [FTP Transfer]
- The last XF-AVC Proxy clip recorded will be selected.

3 **Select all the XF-AVC Proxy clips you wish to transfer.**
- Turn the SELECT dial to select a clip. Press SET to mark a clip for transfer (a check mark will appear next to the clip name). Press SET again to remove the check mark.
- You can press [SELECT ALL] to mark all the clips for transfer, or [CLEAR] to remove the check marks from all the clips marked for transfer.

4 **Once you have selected all the desired clips, press [OK].**
- All the applicable clips will be transferred to the FTP server. When using an Ethernet connection, the 品 (Ethernet) access indicator will flash quickly while the files are being transferred.
- Press [CANCEL] to cancel the transfer while it is in progress.

5 **When the confirmation message appears, press [OK].**

IMPORTANT

- Observe the following precautions when transferring files. Failing to do so may interrupt the transfer and incomplete files may remain at the transfer destination.
  - Do not open the SD card slot cover.
  - Do not remove the power source or turn off the camera.
- If incomplete files remain at the transfer destination, check the content and make sure they are safe to delete before deleting them.

NOTES

- Depending on the access point's settings and capabilities, it may take some time to transfer files.
- You can also transfer the clip that is selected in the PLAY screen using the monitoring menu's EVF ▸ [System Setup] (🔧) ❯ [Network Settings] ❯ [FTP Transfer] ❯ [Activate] setting.

8 Additional Information

Setup Screens and Menu Options

For details about how to select an item, refer to *Using the Menus* (□ 32). For details about each function, see the reference page. Setting options in boldface indicate default values.
Depending on the camera's operating mode and the settings, some menu items may not be available. Such menu items do not appear or appear grayed out in menu screens.

To skip directly to the page of a specific setup screen/menu:

Setup screens:

HOME screen □ 183
ALT (alternative) screen □ 184
TC (time code) screen □ 185
PLAY screen □ 186

Camera menu/Monitoring menu:

[Camera Setup] (🎥) menu □ 186
[Custom Picture] (CP) menu* □ 187
[Audio Setup] (♪)) menu* □ 188
[Rec/Media Setup] (📹) menu □ 188
[Monitoring Setup] (▦) menu □ 190
[Assist. Functions] (▨) menu □ 191
[System Setup] (🔧) menu □ 193
[My Menu]/[My Menu 1] (★1) menu □ 197

* Monitoring menu only.

Setup screens

HOME screen

Screen button commands	Setting options and additional information
[S&F FPS]	Select the frame rate for slow & fast motion recording. (□ 68)
[ACTIVATE]	[On (crop)], [On], **[Off]**
[OPTIONS]	[System Frequency], [Main Rec Format], [Frame Rate], [Resolution/Sampling], [Bit Rate]
	Main recording video configuration options. See the corresponding settings in the table for the [Rec/Media Setup] (📹) menu (□ 188).
[IRIS] (aperture)	Select the aperture value. (□ 79)
[AUTO IRIS]	Press and hold to adjust the aperture automatically. (□ 81)
[ND +], [ND –]	Select the ND filter setting. (□ 78)
[OPTIONS]	[AE Shift], [AE Response], [Mode], [Iris Increment], [Fine Increment], [Iris Indicator], [Zoom-Iris Correct.], [Extended ND Range]
	See the corresponding settings under [AE] and [Iris] in the table for the [Camera Setup] (🎥) menu (□ 186).
[SHUTTER]	Select the shutter angle, shutter speed or clear scan frequency. (□ 74)
⏫, ⏬	Skip 10 values backward/forward.
	These buttons appear only when the shutter speed mode is set to [Clear Scan]. Frequencies are displayed in 1/2-stop increments.
[OPTIONS]	[Mode], [Shutter Increment]
	See the corresponding settings under [Shutter] in the table for the [Camera Setup] (🎥) menu (□ 186).

Screen button commands	Setting options and additional information
[ISO/GAIN]	Select the ISO speed or gain value. (□ 76)
[OPTIONS]	[Select], [Extended Range], [ISO Increment], [Gain Increment]
	See the corresponding settings under [ISO/Gain] in the table for the [Camera Setup] (camera icon) menu (□ 186).
[COLOR] (preset color settings/ custom picture settings)	The screen will show the currently selected preset color setting ([Preset]) and the main settings of the custom picture file: [Gamma], [Color Space] and [Color Matrix]. (□ 84)
[CP MAIN]	[Preset], [Gamma], [Color Space], [Color Matrix] (□ 134)
[CP OTHERS]	[Other Settings], [File]
	For the custom picture settings, refer to the detailed table (□ 135). For the [File] options, see the table for the [Custom Picture] (CP) menu (□ 187).
[LUT]	[MON. 1], [MON. 2], [SDI OUT 1/2/3/4], [SDI OUT 1/2], [SDI OUT 3/4], [HDMI], [VIDEO], [SD XF-AVC]
	See the corresponding settings under [LUT] in the table for the [Monitoring Setup] (monitor icon) menu (□ 190).
[WB] (white balance)	[AWB AWB], [Set A], [Set B], [Daylight], [Tungsten], [WB1 USER_01], [WB2 USER_02], [WB3 USER_03], [WB4 USER_04], [WB5 USER_05] (□ 86)
[ADJUST]	Color temperature: 2,000 K to 15,000 K, Color compensation (CC): –20 to +20 [⌃], [⌄], [<>], [RESET], [OK] (confirm changes)
	Adjust the color temperature and/or color compensation (CC) value.
[WB SET]	[OK] (start the white balance calibration) (□ 87)
	Register a custom white balance setting.
[RENAME]	Text string up to 8 characters (**[USER_01]** to **[USER_05]**) (□ 88)
	Rename a user-set white balance setting.
[OPTIONS]	[Shockless WB], [AWB Response]
	See the corresponding settings under [White Balance] in the table for the [Camera Setup] (camera icon) menu (□ 186).

ALT (alternative) screen

Screen button commands	Setting options and additional information
C700 [AF] (autofocus)	Focus adjustment with the SELECT dial.
[FACE] (face detection)	[On], [Off]
	Turn the face detection function on/off (□ 96).
[TRACKING]	[On], [Off]
	Turn the tracking function on/off (□ 97).
[ONE SHOT]	Press and hold to focus automatically once. (□ 92)
[AF LOCK]	Lock the automatic focus on the current subject. (□ 95)
[✥ FRAME] (move the frame)	[◀], [▶], [▲], [▼], [CENTER] (return the focus frame to the center)
	Move the focus frame (□ 95).
[OPTIONS]	[AF Mode], [AF Frame Position], [AF Frame Size], [Face AF], [AF Speed], [AF Speed Limit], [AF Response]
	See the corresponding settings under [Focus] in the table for the [Camera Setup] (camera icon) menu (□ 186).

Screen button commands	Setting options and additional information
[F. ASSIST.]	Focus adjustment with the SELECT dial.
C700 [FACE] (face detection)	[On], [Off]
	Turn the face detection function on/off (□ 96).
[MAGN.] (magnification)	[On], [Off]
	Turn the magnification function on/off (□ 92).
[PEAKING]	[On], [Off]
	Turn the peaking function on/off (□ 91).
C700 [GUIDE] (focus guide)	[On], [Off]
	Turn the focus guide on/off (□ 90).
[✥ FRAME] (move the frame)	[◀], [▶], [▲], [▼], [CENTER] (return the focus frame to the center)
	Move the focus frame (□ 95).
[OPTIONS]	[Face AF], [Focus Guide], [Peaking], [Magnification]
	See [Focus] ❯ [Face AF] in the table for the [Camera Setup] (🎥) menu (□ 186), or the corresponding settings in the table for the [Assist. Functions] (🖼) menu (□ 191).
[AUDIO]	Audio source, audio level adjustment mode (A or M), and audio level meter for audio channels CH1 to CH4
[CH1/2 IN], [CH3/4 IN] (audio input selection)	[INPUT Terminals], [MIC Terminal], [Monaural Mic]
[REC LEVEL]	[CH1] to [CH4], [CH1/CH2], [CH3/CH4], [OPTIONS] (□ 111) For each channel/pair of channels: [A ⟺ M] (automatic/manual audio level) When set to [M]: Manual audio recording level: 0 to 100 **(50)**
[MONITOR]	**[CH1/CH2]**, [CH1/CH1], [CH2/CH2], [CH1+2/CH1+2], [CH3/CH4], [CH3/CH3], [CH4/CH4], [CH3+4/CH3+4], [CH1+3/CH2+4] (□ 157)
[🎧] (headphone volume)	0 to 15 **(8)** (□ 113)
[OPTIONS]	[Audio Input], [Audio Output]
	See the corresponding settings in the table for the [Audio Setup] (♪)) menu (□ 188).
[CAM LVL] (camera's electronic level)	[Tilt] (degree of rotation degree of rotation of the optical axis up and down), [Roll] (degree of rotation sideways along the optical axis), [SET] (set the camera's current position as baseline) (□ 40)
[NETWORK]	[Browser Remote], [IP Streaming], [FTP Transfer]
[Browser Remote]	Current connection settings, [ACTIVATE]: [On] or [Off], [OPTIONS] (□ 166)
[IP Streaming]	Current connection settings, [ACTIVATE]: [On] or [Off], [OPTIONS] (□ 178)
[FTP Transfer]	After switching to playback mode: Clip selection screen, [OPTIONS] (□ 181)
	See the corresponding settings under [Network Settings] in the table for the [System Setup] (🔧) menu (□ 193).

TC (time code) screen

Screen button commands	Setting options and additional information
[SET TC]	[<], [>] (change selected field), [RESET], [OK] (confirm changes) (□ 101)
[UB] (user bit)	Current user bit of the camera (□ 104)
[SET UB]	[<], [>] (change selected field), [RESET], [OK] (confirm changes)
[OPTIONS]	[Recording Mode], [Type]
	See the corresponding settings under [User Bit] in the table for the [System Setup] (🔧) menu (□ 193).

Screen button commands	Setting options and additional information
[OPTIONS]	[Mode], [Run], [DF/NDF], [TC In/Out]
	See the corresponding settings under [Time Code] in the table for the [System Setup] (🔧) menu (📖 193).

PLAY screen

Information about the clip/photo selected for playback and playback related functions (📖 141).

Screen button commands	Setting options and additional information	
[PB MEDIA] (playback media and format)	[CFast (XF-AVC)], [CFast (ProRes)], [CDX Capture Drive (RAW)], [SD Card (XF-AVC)], [SD Card (Photos)]	(📖 142)
[STEP SIZE]	[1 Frame], [1 sec], [10%] (1/10 of the clip's duration)	(📖 142)
[CLIP LIST]	List of clips, [PB MEDIA]	(📖 142)
[OPTIONS]	[Display Clip Info], [Add OK Mark], [Delete OK Mark], [Add ✓ Mark], [Delete ✓ Mark], [Delete], [Delete User Memo], [Copy CP File], [Recover Clip], [FTP Transfer]	(📖 145)

Camera Menu and Monitoring Menu

[Camera Setup] (🎥) menu

Submenu levels / Menu items	Setting options and additional information	
[Light Metering]	[Backlight], **[Standard]**, [Spotlight]	(📖 82)
[ABB]*	–	(📖 54)
[AE]**		(📖 82)
[AE Shift]	–2.0 to 2.0 in 0.25 point intervals **(±0)**	
[AE Response]	[High], **[Normal]**, [Low]	
	Determines how quickly the aperture is adjusted during automatic exposure. This setting has no effect when one of the following lenses is attached. · CN7x17 KAS S/E1 · CN7x17 KAS S/P1 · CN20x50 IAS H/E1 · CN20x50 IAS H/P1 · Broadcast lenses compatible with automatic aperture (📖 221)	
[ISO/Gain]**		(📖 76)
[Select]	**[ISO]**, [Gain]	
[Extended Range]	[On], **[Off]**	
[ISO Increment]	[1 stop], **[1/3 stop]**	
[Gain Increment]	**[Normal]**, [Fine]	
[Iris]**		(📖 79)
[Mode]	[Automatic], **[Manual]**	
	This setting is available only when a compatible lens (📖 221) is attached to the camera.	
[Iris Increment]	[1/2 stop], **[1/3 stop]**	
[Fine Increment]	[On], **[Off]**	
[Iris Indicator]	**[F]**, [T]	
	Determines whether the aperture value will be displayed on the control display and monitoring screen in terms of F values or T values (only when using an EF Cinema lens).	
[Zoom-Iris Correct.]	**[On]**, [Off]	
	If you are using a compatible lens, when this setting is set to [On], the camera will adjust the aperture as needed to keep the selected aperture value while zooming. Because of this adjustment, the brightness of the image might flicker slightly or you may hear the operation sound.	

Submenu levels / Menu items	Setting options and additional information	
[Extended ND Range]**	[On], **[Off]**	(🕮 78)
[Shutter]**		(🕮 74)
[Mode]	[Speed], **[Angle]**, [Clear Scan], [Slow], [Off]	
[Shutter Increment]	[1/3 stop], **[1/4 stop]**	
[White Balance]**		
[Shockless WB]	[On], **[Off]**	(🕮 86)
[AWB Response]	[High], **[Normal]**, [Low]	(🕮 87)
C700 [Focus]**		
[AF Mode]	**[One Shot]**, [AF-Boosted MF], [Continuous]	(🕮 89)
[AF Frame Position]	**[Selectable]**, [Center Frame]	(🕮 95)
[AF Frame Size]	**[Large]**, [Small]	(🕮 95)
[Face Detection]	[On], **[Off]**	(🕮 96)
[Face AF]	**[Face Priority]**, [Face Only]	(🕮 96)
[AF Speed]	–7 to +2 **(0)**	(🕮 94)
[AF Speed Limit]	**[Always]**, [Only While Recording]	(🕮 94)
[AF Response]	–3 to +3 **(0)**	(🕮 94)
[Color Bars]		(🕮 114)
[Activate]	[On], **[Off]**	
[Type]	**[SMPTE]**, **[EBU]*****, [ARIB]	
[Mount Adapter]	C700 [MO-4E], C700 PL C700 GS PL [MO-4P], **[Off]**	
	When an optional MO-4E or MO-4P B4 Mount Adapter is attached to the camera, this setting optimizes optical settings for the adapter. When this setting is set to an option other than [Off], the video configuration will change automatically to 1920x1080, YCbCr 10 bit, 50 Mbps Long GOP at 59.94i or 50.00i (depending on the system frequency).	
[Focus Control]	**[Camera]**, [Lens]	
	Determines the signal path used to adjust the focus. [Camera]: Use the default setting for most cases. [Lens]: You can adjust the focus using an accessory connected to the lens but you will not be able to use the camera's autofocus functions or an optional RC-V100 Remote Controller connected to the camera to adjust the focus.	
C700 C700 PL [Flash Band Corr.]	[On], **[Off]**	(🕮 75)
C700 [Periph. Illum. Corr.]	[On], **[Off]**	(🕮 47)
[Chrom. Aberr. Corr.]	[On], **[Off]**	(🕮 47)
[Lens Info]	–	(🕮 44)

* Camera menu only.
** Monitoring menu only.
*** The default value depends on the country/region or purchase.

[Custom Picture] (CP) menu (monitoring menu only)

Submenu levels / Menu items	Setting options and additional information	
[Preset], [Main Settings], [Other Settings]	Refer to *Preset Color Settings* (🕮 84) and the *Available Custom Picture Settings* tables (🕮 134).	
[File]		
[Select]	**[C1:CP000001]** to [C20:CP000020]	(🕮 131)
[Rename]	–	(🕮 132)
[Protect]	**[Unprotect]**, [Protect]	(🕮 132)
[Reset]	[Cancel], [OK]	(🕮 132)
[Transfer]	[Copy to SD], [Load from SD]	(🕮 133)

[Audio Setup] menu (♪)) (monitoring menu only)

Submenu levels / Menu items	Setting options and additional information	
[Audio Input]		
[Select CH1/CH2 Input], [Select CH3/CH4 Input]	**[INPUT Terminals]**, [MIC Terminal], [Monaural Mic]	(□ 111)
[Audio Rec Level CH1] to [Audio Rec Level CH4], [Audio Rec Level CH1/CH2], [Audio Rec Level CH3/CH4]	**[Automatic]**, [Manual]	(□ 111)
[CH1 Level] to [CH4 Level], [CH1/CH2 Level], [CH3/CH4 Level]	0 to 100 **(50)**	(□ 111)
[CH2 Input]	**[INPUT 2]**, [INPUT 1]	(□ 111)
[INPUT 1 Mic Trim], [INPUT 2 Mic Trim]	[+12 dB], [+6 dB], **[0 dB]**, [–6 dB], [–12 dB]	(□ 112)
[INPUT 1 Mic Att.], [INPUT 2 Mic Att.]	[On], **[Off]**	(□ 113)
[INPUT 1&2 Limiter]	[On], **[Off]**	(□ 111)
[MIC Att.]	[On], **[Off]**	(□ 113)
[MIC Low Cut]	[On], **[Off]**	(□ 113)
[CH1/CH2 ALC Link], [CH3/CH4 ALC Link]	[Linked], **[Separated]**	(□ 111)
[1 kHz Tone]	[–12 dB], [–18 dB], [–20 dB], **[Off]**	(□ 114)
[Audio Output]		
[Headphone Volume]	[Off], 1 to 15 **(8)**	(□ 143)
[Monitor Channels]	**[CH1/CH2]**, [CH1/CH1], [CH2/CH2], [CH1+2/CH1+2], [CH3/CH4], [CH3/CH3], [CH4/CH4], [CH3+4/CH3+4], [CH1+3/CH2+4]	(□ 157)
[HDMI Channels], [RAW (SDI) Channels]	**[CH1/CH2]**, [CH3/CH4]	(□ 157)

[Rec/Media Setup] (📷) menu

Submenu levels / Menu items	Setting options and additional information	
[Initialize Media]	[CFast A], [CFast B], [SD Card], [CDX Capture Drive]	(□ 51)
[Main Rec Format]	**[XF-AVC (CFast)]**, [ProRes (CFast)], [RAW (CDX Capture Drive)], [RAW (SDI OUT)]	(□ 65)
[Slow & Fast Motion]*	[On (crop)], [On], **[Off]**	(□ 68)
[System Frequency]	**[59.94 Hz]**, **[50.00 Hz]****, [24.00 Hz]	(□ 65)
[Frame Rate]	When [System Frequency] is set to [59.94 Hz]: [59.94i], **[59.94P]**, [29.97P], [23.98P] When [System Frequency] is set to [50.00 Hz]: [50.00i], **[50.00P]**, [25.00P]	(□ 65)
[Resolution/Sampling]	When [Main Rec Format] is set to one of the CFast options: [4096x2160 YCC 10 bit], **[3840x2160 YCC 10 bit]**, [2048x1080 RGB 12 bit], [2048x1080 RGB 10 bit][1], [2048x1080 YCC 10 bit][2], [1920x1080 RGB 12 bit], [1920x1080 RGB 10 bit][1], [1920x1080 YCC 10 bit][2] When [Main Rec Format] is set to one of the RAW options: [4096x2160 RAW][3] [1] [XF-AVC (CFast)] only. [2] When slow & fast motion recording is activated in crop mode, only these settings are available. [3] When slow & fast motion recording is activated in crop mode, the resolution will change to [2048x1080 RAW].	(□ 65)

Submenu levels / Menu items	Setting options and additional information
[Bit Rate]	When [Main Rec Format] is set to [XF-AVC (CFast)][4]: (□ 66) [810 Mbps Intra-frame], [440 Mbps Intra-frame], [410 Mbps Intra-frame], [310 Mbps Intra-frame], [225 Mbps Intra-frame], [210 Mbps Intra-frame], [170 Mbps Intra-frame], [160 Mbps Intra-frame], [90 Mbps Intra-frame], [50 Mbps Long GOP] When [Main Rec Format] is set to [ProRes (CFast)][4]: [ProRes4444], [ProRes422HQ], [ProRes422]
	[4] Most bit rate settings are set automatically by the camera according to other video configuration settings. For details about the settings that can be selected by the user, check the tables on the reference page.
[Sub Rec (XF-AVC)]	(□ 71)
[Recording Media]	[CFast][5], [SD Card], **[Off]**
	[5] Only when [Main Rec Format] is set to one of the RAW options.
[Resolution/Sampling]	**[4096x2160 YCC 10 bit]**, [3840x2160 YCC 10 bit], [2048x1080 YCC 10 bit], [1920x1080 YCC 10 bit]
[Apply LUT]*	[BT.709], [BT.2020], [DCI], **[Off]**
[Double/Relay Rec]	(□ 52)
[Double Slot Rec], [Relay Recording]	[On], **[Off]**
[Rec Command]	[On], **[Off]**
	When you connect the camera to an external recorder, if you start or stop recording with the camera, the other device will also start or stop recording.
[Metadata]	
[Camera Index]	**[A]** to [Z] (□ 62)
[Reel Number], [Clip Number]	**[001]** to [999] (□ 62)
[User Defined]	User defined string up to 5 characters **([CANON])** (□ 62)
[Scene], [Take]	Scene description up to 16 characters / Take description up to 8 characters (□ 119)
[Lens Squeeze]	[x2.0], [x1.3], **[Off]** (□ 122)
[Setting]	[Remote], **[SD Card]** (□ 118, 176)
[User Memo]	**[Off]**, list of user memo files available on the SD card (□ 118)
[Country Code], [Organization], [User Code]	Identifiers up to 4 characters (**[00__]** default for [Organization] only)
	[Country Code]: This identifier is the country code defined by ISO-3166-1 and is to be entered starting from the left. [Organization]: This identifier represents the organization that owns or operates the camera and can be obtained by registering with the SMPTE Registration Authority. If the organization is not registered, enter [0000]. [User Code]: This identifier designates the user. Leave this blank if [Organization] is set to [0000].
[Add CP File]	**[On]**, [Off] (□ 133)
[Photo Numbering]	[Reset], **[Continuous]** (□ 125)

* Monitoring menu only.
** The default value depends on the country/region or purchase.

[Monitoring Setup] (▤) menu

Submenu levels / Menu items			Setting options and additional information
[Control Display]			(📖 31)
	[Camera]		
		[Brightness]	1 to 5 **(3)**
		[Turn Off Display]	**[Assignable Buttons]**, [Auto (Remote OU-700)]
	[Remote OU-700]		
		[Brightness]	1 to 5 **(3)**
[EVF-V70]*			(📖 42)
	[Brightness], [Contrast]		–99 to 99 **(±0)**
	[Color]		–20 to 20 **(±0)**
	[Sharpness]		1 to 4 **(2)**
	[Luminance]		**[Normal]**, [High]
	[Eye Sensor]		**[On]**, [Off] When this setting is set to [On], the optional viewfinder will be dimmed automatically when the sensor does not detect the user's eye near the eyepiece for 30 seconds (or 10 seconds, in playback mode).
[Surrounding Area]			
	[Activate]		**[On]**, [Off] When this setting is set to [On], the image from the camera will be reduced and some of the surroundings around the recorded frame will be shown on the shooting screen.
	[Select]		**[Line]**, [Mask 25%], [Mask 50%], [Mask 75%] You can use a color line or apply masking to the non-recorded areas to distinguish the area covered by the recorded frame from the surroundings. If you selected [Line], you can select the color of the border line with the [Line Color] setting.
	[Line Color]		[Yellow], [Blue], [Green], [Red], [Black], [Gray], **[White]**
[Anamorphic]			(📖 122)
	[Desqueeze Ratio]		**[Lens Squeeze Factor]**, [x2.0], [x1.3]
	[VIDEO Output], [MON.+HDMI Output]		[On], **[Off]**
[LUT]*			(📖 154)
	[MON. 1], [MON.2], [SDI OUT 1/2/3/4], [SDI OUT 1/2], [SDI OUT 3/4], [HDMI]		[BT.709], [BT.2020], [DCI], [ACESproxy], [HDR-ST 2084], **[Off]**
	[VIDEO]		[BT.709], [ST 2084 Assist. (1600%)], [ST 2084 Assist. (400%)], **[Off]**
[B&W Image]			
	[VIDEO Output], [MON.+HDMI Output]		[On], **[Off]** When this setting is set to [On], the live image from the camera displayed on the optional viewfinder (VIDEO terminal) or on an external monitor (MON. terminals or HDMI OUT terminal) to black & white. If enabled, onscreen displays will appear in color.
[OSD Output]			(📖 155)
	[VIDEO]		
		[Output]	**[On]**, [Off]
		[Peripheral Border]	**[On]**, [Off]
	[MON.+HDMI]		
		[Output]	**[On]**, [Off]
		[Peripheral Border]	**[On]**, [Off]

Submenu levels / Menu items	Setting options and additional information
[Displayed Units]	**[Meters]**, **[Feet]**** Changes the distance units used in camera displays between meters and feet.
[Custom Display 1]	(□ 139)
[Light Metering], [Custom Picture], [Focal Length], [ND Filter], [Focus Mode], [Key Lock], [White Balance], [Exposure], [Iris], [ISO/Gain], [Shutter], [Peaking], [Magnification], [LUT], [Lens], [Mount Adapter], C700 C700 PL [Flash Band Corr.]	**[On]**, [Off]
[Custom Display 2]	(□ 139)
[DC IN / Battery], [Remaining Rec Time]	[Only Warnings], **[Normal]**, [Off]
[Recording Mode], [Genlock], [Time Code], [Camera Index], [Reel/Clip Number]	**[On]**, [Off]
[Remaining Photos]	[Only Warnings], **[Normal]**, [Off]
[Temperature/Fan], [Frame Rate], [OSD Output], [Rec Command], [Level], [Audio Lvl Indicator], [Network Functions], [GPS]	**[On]**[1], [Off] [1] However, the default for [OSD Output] and [Level] is [Off]. [On], [Normal]: Show the icon/onscreen display always or whenever the necessary conditions are triggered. [Only Warnings]: Show the icon/onscreen display only when a critical level is reached.
[Custom Display]	(□ 139)
[Camera Index], [Audio Lvl Indicator]	**[On]**, [Off]
[Date/Time], [Camera Data]	[On], **[Off]** These settings are available only when the menu is opened from the PLAY screen (□ 144) and determine whether the following onscreen displays will appear on the playback image. [Camera Index]: The identifier of the camera used to shoot the clip/photo. [Audio Lvl Indicator]: The audio level meter (clips only). [Date/Time]: The date and time when the clip/photo was recorded. [Camera Data]: The aperture value, shutter speed and ISO speed/gain value used to record the clip (clips only).

* Monitoring menu only.
** The default value depends on the country/region of purchase.

[Assist. Functions] (□) menu

Submenu levels / Menu items	Setting options and additional information
C700 [Focus Guide]*	(□ 90)
[Activate]	[On], **[Off]**
[Display 2nd Frame]	[On], **[Off]**
[Peaking]*	(□ 91)
[VIDEO Output], [MON.+HDMI Output]	[On], **[Off]**
[Select]	**[Peaking 1]**, [Peaking 2]
[Peaking 1]	
[Color]	**[White]**, [Red], [Yellow], [Blue]

Submenu levels / Menu items	Setting options and additional information
[Gain]	[Off], 1 to 15 **(8)**
[Frequency]	1 to 4 **(2)**
[Peaking 2]	
[Color]	[White], **[Red]**, [Yellow], [Blue]
[Gain]	[Off], 1 to 15 **(15)**
[Frequency]	1 to 4 **(1)**
[Focus Assist. B&W]	[On], **[Off]**
[Magnification]*	(📖 92)
[Available While Rec]	[On], **[Off]**
[VIDEO Output], [MON.+HDMI Output]	[On], **[Off]**
[Focus Assist. B&W]	[On], **[Off]**
[False Color]	(📖 100)
[VIDEO Output], [MON.1 Output], [MON.2 Output], [HDMI Output]	[On], **[Off]**
[Color Index]	–
[Zebra]	(📖 99)
[VIDEO Output], [MON.+HDMI Output]	[On], **[Off]**
[Select]	**[Zebra 1]**, [Zebra 2], [Zebra 1+2]
[Zebra 1 Level]	[5 ±5%] to [95 ±5%] in 5 percentage point intervals (**[70 ±5%]**)
[Zebra 2 Level]	0% to 100% in 5 percentage point intervals **(100%)**
[Waveform Monitor]	(📖 115)
[VIDEO Output], [MON.+HDMI Output]	[On], **[Off]**
[Type]	**[Line]**, [Line+Spot], [Select Line], [Field], [RGB], [YPbPr]
[Gain]	**[1x]**, [2x]
[Y Position]	**[0%]**, [15%], [30%], [45%], [50%]
[Select Line]	When the vertical resolution is 1080: 0 to 1079 in 1-line increments **(540)**, [Set]* When the vertical resolution is 2160: 0 to 2158 in 2-line increments **(1080)**, [Set]*
[Markers]	(📖 98)
[VIDEO Output], [MON.+HDMI Output]	**[On]**, [Off]
[Center], [Horizontal], [Grid], [Aspect Marker]	[Yellow], [Blue], [Green], [Red], [Black], [Gray], [White], **[Off]**
[Aspect Ratio]	[4:3], [13:9], [14:9], [16:9], [1.375:1], [1.66:1], [1.75:1], [1.85:1], [1.90:1], [2.35:1], **[2.39:1]**, [Custom]
[Custom Ratio]	1.00:1 to 9.99:1 **(1.00:1)**
[Safe Area]	[Yellow], [Blue], [Green], [Red], [Black], [Gray], [White], **[Off]**
[Basis for Safe Area]	**[Whole Picture]**, [Selected Aspect Marker]
[Safe Area %]	[80%], [90%], [92.5%], **[95%]**

* Monitoring menu only.

[System Setup] (🔧) menu

Submenu levels / Menu items	Setting options and additional information	
[Reset]	[All Settings], [Assignable Buttons], [Level]	
	These settings reset the following camera settings to default values/settings. [All Settings]: All the camera's settings except for the hour meter. [Assignable Buttons]: Only the assignable buttons. [Level]: Only the camera's level (electronic horizon).	
[Transfer Menu/CP]		(📖 140)
[Save]	[To Camera], [To SD]	
[Load]	[From Camera], [From SD]	
[Set Clock]		(📖 29)
[Date/Time]	–	
[Date Format]	[YMD], [YMD/24H], **[MDY]**, [MDY/24H], **[DMY]*** [DMY/24H]	
[Time Zone]	List of world time zones (**[UTC-05:00 New York]** or **[UTC+01:00 Central Europe]**)**	
[Language]	[Deutsch], [English], [Español], [Français], [Italiano],[Polski], [Português], [Русский], [简体中文], [한국어], [日本語]	(📖 29)
[Term. Output Setup]		
[HDMI Max Res.]	[4096x2160 / 3840x2160], **[1920x1080]**	(📖 153)
[MON. Output]	[2048x1080 / 1920x1080], **[1920×1080]**, [Off]	(📖 153)
[SDI OUT Output]	**[On]**, [Off]	(📖 152)
[3G-SDI Mapping]	[Level A], **[Level B]**	(📖 152, 153)
[GENLOCK/SYNC OUT]		
[Terminal Function]	[HD Sync Output], **[Genlock Input]**	(📖 105)
[Genlock Adjustment]	–1023 to +1023 **(000)**	(📖 106)
	The phase difference between the external Genlock signal and the camera is initially set to 0. This setting allows you to adjust it within the range of approx. ±0.4 H (–1023 to 1023). To set a 4-digit adjustment value, set the first field to 10 or –10.	
[SYNC Scan Mode]	**[P]**, [PsF]	(📖 107)
[Time Code]*		(📖 101)
[Mode]	**[Preset]**, [Regen.]	
[Run]	**[Rec Run]**, [Free Run]	
[DF/NDF]	**[DF]**, **[NDF]***	
[Setting]	**[00:00:00:00]** to [23:59:59:29]	
[TC In/Out]	**[In]**, [Out]	(📖 106, 107)
[User Bit]*		(📖 104)
[Recording Mode]	**[Internal]**, [External]	
[Type]	**[Setting]**, [Time], [Date]	
[REMOTE Term.]	[RC-V100 (REMOTE B)], [RC-V100 (REMOTE A)], **[Standard]**	(📖 123)
[Assignable Buttons]	Following are the default settings for each assignable button. For a complete list of the functions that can be assigned, refer to the detailed table (📖 128).	
[Camera] [1] to [5]	1: **[Magn.: MON.+HDMI]**, 2: **[Peaking: MON.+HDMI]**, 3: **[False Color: MON.+HDMI]**, 4: **[WFM: MON.+HDMI]**, 5: **[One-Shot AF]**	
[EVF-V70] [1] to [4]	1: **[FUNC]**, 2: **[EVF-V70 Setup]**, 3: **[Magn.: VIDEO]**, 4: **[False Color: VIDEO]**	
[Grip SG-1] [1]	1: **[One Shot AF]**	
[Remote RC-V100] [1] to [4]	1: **[Magn.: MON.+HDMI]**, 2: **[Peaking: MON.+HDMI]**, 3: **[False Color: MON.+HDMI]**, 4: **[Waveform Monitor]**	

Submenu levels / Menu items	Setting options and additional information
[CUSTOM Switch]	(📖 77, 80)
[1]	**[Iris]**, [ISO/Gain], [Off]
[2]	[Iris], [ISO/Gain], **[Off]**
[Control Dial Dir.]	
[Camera], [Grip SG-1]	[Reverse], **[Normal]**
	Changes the direction of the adjustment when operating the control dial on the camera or on an optional SG-1 Shoulder Style Grip Unit attached to the camera, respectively.
[SELECT Dial Dir.]	
[Camera], [Remote OU-700], [EVF-V70]	[Reverse], **[Normal]**
	Changes the direction of the adjustment when operating the SELECT dial on the camera, or on an optional OU-700 Remote Operation Unit or optional EVF-V70 OLED Electronic Viewfinder attached to the camera, respectively.
[🔒 Button]	**[Linked]**, [Separated] (📖 56)
	When an optional OU-700 Remote Operation Unit is connected to the camera, this setting determines if the 🔒 buttons on the camera and the OU-700 lock only local controls ([Separated]) or if either will lock all the controls, both on the camera and on the OU-700 ([Linked]).
[Key Lock]	[All Buttons], **[All Except REC Button]**
	Selects whether to lock all buttons (including REC buttons) or all buttons with the exception of currently enabled REC buttons).
[REC Button]	
[Control Display Side], [Front], [Media Slot Side], [Grip SG-1], [Remote OU-700]	[Disable], **[Enable]**
	Independently enables or disables the use of individual REC buttons on the camera (on the left side next to the control display, on the front, or on the right side next to the card slots), or on an optional SG-1 Shoulder Style Grip Unit or optional OU-700 Remote Operation Unit attached to the camera.
[LED]	
[Button Illumination]	
[Camera/EVF-V70], [Remote OU-700]	**[High]**, [Low], [Off]
[Tally Lamp]	
[Camera], [Remote OU-700]	**[On]**, [Off]
[Media Access], [LAN (Ethernet)]	**[On]**, [Off]
	These settings determine whether the following LEDs and indicators will illuminate. [Button Illumination]: Controls the illumination of physical buttons on the camera or on an optional OU-700 Remote Operation Unit connected to the camera. Buttons that illuminate when you select an option other than [Off] are indicated in the *Names of Parts* (📖 13). [Tally Lamp]: The tally lamp on the camera or on an optional OU-700 Remote Operation Unit connected to the camera. Note that regardless of this setting, when the camera is turned off, the tally lamps will illuminate in red momentarily after the POWER button is pressed. [Media Access]: The CFast card access indicators and SD card access indicator when the camera is accessing the respective recording media. [LAN (Ethernet)]: The 🖧 (Ethernet) indicator when the camera is accessing a wired network.
[Fan]	(📖 63)
[Mode]	[Automatic], **[Always On]**
[Fan Speed (STBY)]	[Maximum], [High], [Middle], **[Low]**
[Fan Speed (REC)], [Fan Speed (Always)]	[High], [Middle], **[Low]**
[Fan Speed]	[High], [Middle], **[Low]**

Submenu levels / Menu items	Setting options and additional information
[Low Power Warning]	(📖 27)
[DC IN (V)], [Battery (V)]	12.0 V to 15.0 V in 0.1 V intervals **(13.0 V)**
[Battery (%)]	1% to 10% **(5%)**
[Rec Operation Beep]	[Start and Stop], [Stop Only], [Start Only], **[Off]**
[Scan Reverse Rec]	
[Setting]	[Both], [Vertical], [Horizontal], **[Off]**
	Inverts the recorded image horizontally and/or vertically. Not available during RAW video recording/ output.
[3D Rec Mode]	[On], **[Off]**
	When using another C700 / C700 PL / C700 GS PL camera to shoot in 3D, this function corrects any lags in the video and audio signals output from the SDI OUT or MON. terminals.
[Level Sensitivity]	[x16], [x8], [x4], [x2], **[Standard]**
	Adjusts the sensitivity of the camera's level (electronic horizon).
[Network Settings]*	
[Browser Remote]	(📖 166)
[Display Info]	–
[Activate]	[On], **[Off]**
[Connection Method]	**[Camera Access Point]**, [Ethernet]
[SSID]	Network name up to 32 characters **([C700-xxxx-xx_Canon0C])**
[Frequency]	[5 GHz], **[2.4 GHz]**
[Channel]	Available Wi-Fi channels depend on the model of wireless file transmitter used. For details, refer to the “Areas of Use and Restrictions” leaflet supplied with the optional WFT-E6 or WFT-E8 Wireless File Transmitter. (Default channel is **[1]**)
[Authn/Encr Method]	**[WPA2-PSK/AES]**, [Open/No encryption]
[Password]	**[12345678]**
[IP Address Assign.]	**[Automatic]**, [Manual]
[IP Address]	0.0.0.0 to 255.255.255.255 (**[192.168.0.80]**)
[Subnet Mask]	0.0.0.0 to 255.255.255.255 (**[192.168.0.80]**)
[Default Gateway]	0.0.0.0 to 255.255.255.255 (**[0.0.0.0]**)
[Port No.]	1 to 65535 (**[80]**)
[Camera ID]	Camera identifier up to 8 characters (**[C700]**)
[Users Settings]	**[One User (Full)]**, [Two Users (Camera/Meta)]
[Full: User Name], [Camera: User Name], [Meta: User Name]	User name up to 32 characters (Default user names are **[Full]**, **[Camera]** and **[Meta]**, respectively)
[Full: Password], [Camera: Password], [Meta: Password]	Password up to 8 characters (**[12345678]**)
[Check MAC Address]	–
[IP Streaming]	(📖 178)
[Display Info]	–
[Activate]	[On], **[Off]**
[Connection Method]	**[Ethernet]**, [Infrastructure]
[Wi-Fi Setup Method]	[WPS: Button], [WPS: PIN Code], [Search for Access Points]
[SSID]	Network name up to 32 characters
[Authn/Encr Method]	[WPA, WPA2-PSK / TKIP, AES], **[Open/No encryption]**, [Open/WEP 1] to [Open/WEP 4], [Shared Key/WEP 1] to [Shared Key/WEP 4]

Submenu levels / Menu items		Setting options and additional information
	[Password]	–
	[IP Address Assign.]	**[Automatic]**, [Manual]
	[IP Address], [Subnet Mask], [Default Gateway]	0.0.0.0 to 255.255.255.255 (**[0.0.0.0]**)
	[Protocol]	**[UDP]**, [RTP], [RTP+FEC], [RTSP+RTC]
	[Dest. IP Address]	0.0.0.0 to 255.255.255.255 (**[0.0.0.0]**)
	[Dest. Port No.]	1024 to 65530 (**[5000]**)
	[FEC Port No.]	1026 to 65532 (**[5002]**)
	[FEC Interval]	10 to 100 in intervals of 5 **(100)**
	[RTSP: User Name]	User name up to 24 characters (**[user]**)
	[RTSP: Password]	Password up to 32 characters (**[12345678]**)
	[Video Output Conf.]	When [System Frequency] is set to [59.94 Hz]: **[9Mbps/1920x1080 59.94i]**, [4Mbps/1920x1080 59.94i], [2Mbps/1280x720 29.97P], [1.5Mbps/720x480 59.94i] When [System Frequency] is set to [50.00 Hz]: **[9Mbps/1920x1080 50i]**, [4Mbps/1920x1080 50i], [2Mbps/1280x720 25P], [1.5Mbps/720x576 50i]
	[Audio Out Channels]	**[CH1/CH2]**, [CH3/CH4]
	[Check MAC Address]	–
[FTP Transfer]		These settings are available only when the menu is opened from the PLAY screen (🕮 143). (🕮 181)
	[Activate]	[On], **[Off]**
	[Connection Method]	**[Ethernet]**, [Infrastructure]
	[Wi-Fi Setup Method]	[WPS: Button], [WPS: PIN Code], [Search for Access Points]
	[SSID]	Network name up to 32 characters
	[Authn/Encr Method]	[WPA, WPA2-PSK / TKIP, AES], **[Open/No encryption]**, [Open/WEP 1] to [Open/WEP 4], [Shared Key/WEP 1] to [Shared Key/WEP 4]
	[Password]	–
	[IP Address Assign.]	**[Automatic]**, [Manual]
	[IP Address], [Subnet Mask], [Default Gateway], [Primary DNS Server], [Secndry DNS Server]	0.0.0.0 to 255.255.255.255 (**[0.0.0.0]**)
	[FTP Server]	Server name up to 32 characters
	[FTP: User Name]	User name up to 32 characters
	[FTP: Password]	Password up to 32 characters
	[Destination Folder]	Destination folder's path up to 152 characters (Default is the root folder **[/]**)
	[Port No.]	1 to 65535 (**[21]**)
	[Passive Mode]	[On], **[Off]**
	[New Folder by Date]	**[On]**, [Off]
	[Same Named Files]	**[Skip]**, [Overwrite]
	[Check MAC Address]	–

Submenu levels / Menu items	Setting options and additional information
[GPS]	These settings are available only when the optional GP-E1 GPS Receiver is attached to the camera. (📖 120)
[Activate], [Auto Time Setting]	[On], **[Off]**
[Display Info]	–
	Displays a screen where you can check the data received from the GPS signal (latitude, longitude, altitude, UTC data) as well as an indication of the satellite signal's strength.
[Retract Lens]	**[On]**, [Off]
	When one of the following lenses is attached to the camera and the focus mode switch on the lens is set to AF, if this setting is set to [On], the lens will retract fully when the camera is turned off. • EF 40mm f/2.8 STM • EF-S 24mm f/2.8 STM • EF 50mm f/1.8 STM
[Reset Hour Meter]	–
	The camera has two "hour meters" – the first keeps track of total operation time and the second keeps track of operation time since the last time the second hour meter was reset with this function.
[Certification Logos]***	–
	Displays certification logos that apply to this camera on the control display.
[Firmware]	
[Camera], [Remote OU-700]	–
	Displays the current firmware version of the camera or updates the firmware version of an optional OU-700 Remote Operation Unit. These settings are usually unavailable.
[Lens]	– (📖 45)

* Monitoring menu only.
** The default value depends on the country/region or purchase.
*** Camera menu only.

[My Menu]* / [My Menu 1]** (★1)

Submenu levels / Menu items	Setting options and additional information
[Select]	Camera menu: **[1: CAMERA-1]**, [2: CAMERA-2], [3: CAMERA-3] Monitoring menu: **[1: CAMERA-4]**, [2: CAMERA-5], [3: CAMERA-6] (📖 35)
[Edit]	[Register], [Move], [Delete], [Reset All], [Rename]

* Camera menu only.
** Default setting in the monitoring menu only. The number in the menu setting and icon will reflect the My Menu set currently selected.

Displaying the INFO Screens

You can use the INFO screens to check the camera's status and various settings.

1 Press the INFO button to open the INFO screen.
- The **INFO** ▸ [LIVE] screen (camera status) will appear on the control display.

2 Press other screen buttons as necessary to check the other information screens.
- On INFO screens with many items turn the SELECT dial to scroll through all the information.

Options

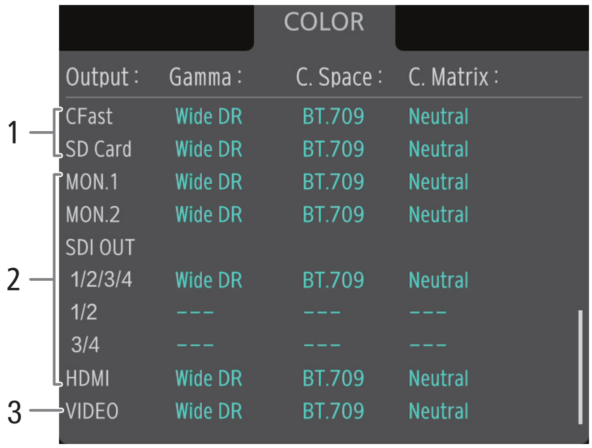
[LIVE] screen:	Camera status and error messages (🕮 198).
[COLOR] screen:	Color settings (gamma curve, color space, color matrix) in use (🕮 198).
[CP] screen:	Custom picture file (🕮 199).
[SYSTEM] screen:	Basic information about the system (🕮 199)
[VIDEO] screen:	Information about the video output signals (🕮 200)
[MEDIA] screen:	Information about recording media (🕮 200).

[LIVE] (current status) screen



When the INFO icon (INFO) appears on the control display, open the **INFO** ▸ [LIVE] screen to check important information regarding the status of the camera. If there are no problems with the camera, [System Status: Good] will be displayed. If an error message appears on this screen, check the list of messages (🕮 206).

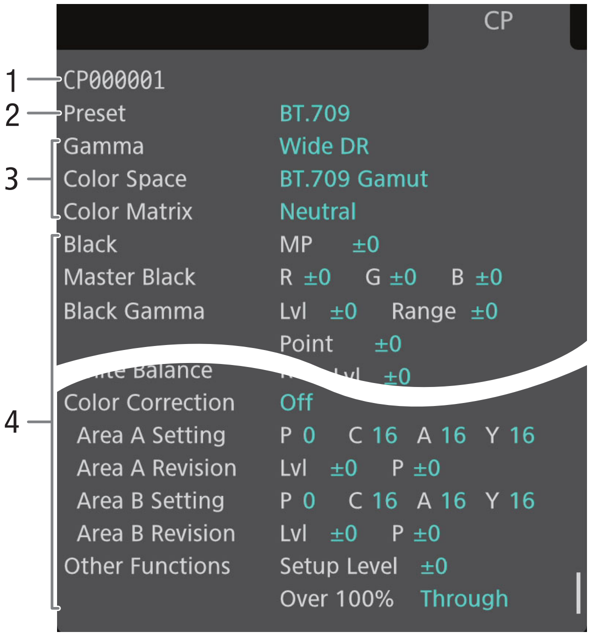
[COLOR] screen



Gamma curve, color space and color matrix used for recordings, video output and displays.

1 [CFast]: Settings used for clips recorded on the CFast card (🕮 84, 134)
[SD Card]: Settings/LUT used for sub recording (XF-AVC Proxy) clips (🕮 71)
2 Settings/LUT used for video outputs from the respective terminals (🕮 154)
3 [VIDEO]: Settings/LUT used for the optional viewfinder (🕮 154)

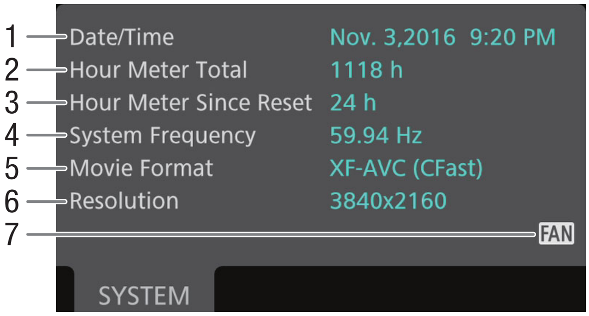
[CP] screen



Custom picture settings in use.

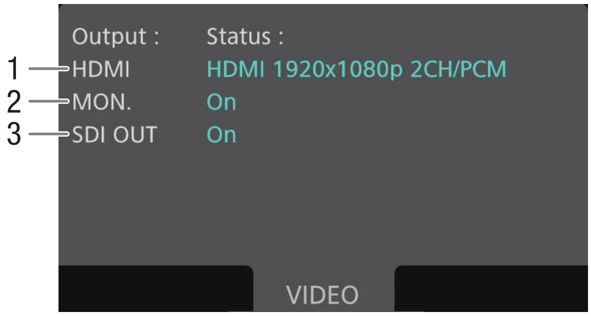
1 Custom picture file name (🕮 131)
2 Preset color settings (🕮 84)
3 Custom picture main settings (🕮 134)
4 Custom picture other settings (🕮 135)

[SYSTEM] screen



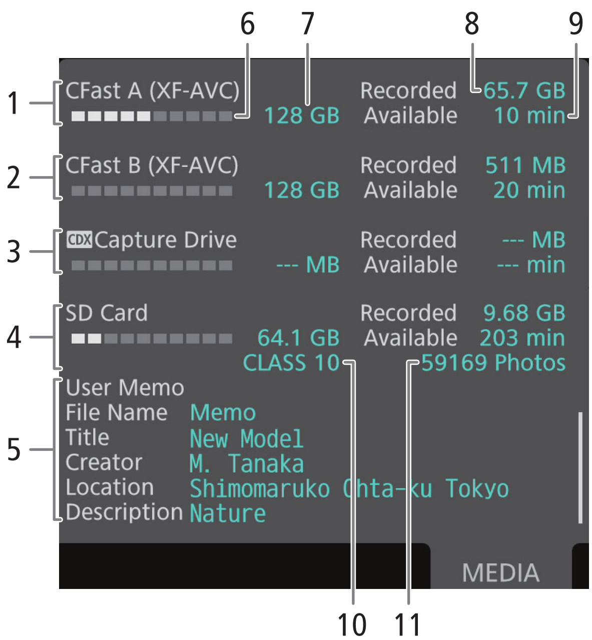
1 Date and time (🕮 29)
2 Total operation time
3 Operation time since [Reset Hour Meter] was used last (🕮 197)
4 System frequency (🕮 65)
5 Main recording format (🕮 65)
6 Resolution (🕮 65)
7 Temperature warning and fan operation (🕮 63)

[VIDEO] screen



1 Output signal from the HDMI OUT terminal (153)
2 Output from the MON. terminals activated or not (153)
3 Output from the SDI OUT terminals activated or not (152)

[MEDIA] screen



1 CFast card A and recording format
2 CFast card B and recording format
3 Capture Drive 2.0 in a CDX-36150 Recorder docked with the camera*
4 SD card
5 User memo (118, 176)
User memo file name, title, creator, shooting location and description

For each:
6 Visual bar: Approximate used/available space
7 Total space
8 [Recorded]: Used space
9 [Available]: Available space

Only for the SD card:
10 SD speed class
11 Number of remaining photos

* For details about docking the CDX-36150 Recorder with the camera and using it to record, refer to *Codex Recorder – Guide for the EOS C700 models* (separate PDF file).

NOTES

- Depending on the recording media, the total space displayed on the screen may differ from the nominal capacity listed on the CFast card or SD card.

Troubleshooting

If you have a problem with your camera, refer to this section. Consult your dealer or a Canon Service Center if the problem persists.

Power source

The camera will not turn on or it turns off by itself.

- The input voltage of the battery or power source connected to the DC IN 12V terminal is too low. Check the power source.
- Excess current to the lens has been detected. Remove the lens. Clean the contacts on the lens mount and lens and reattach the lens.

Recording

The camera's controls are not responsive/disabled.

- When the key lock function is activated, all buttons (or all buttons with the exception of some REC buttons) are locked and cannot be operated. Press and hold the 🔒 button for about 4 seconds to turn off the key lock function. You can change which controls are locked with the MENU ▸ [System Setup] ❯ [Key Lock] setting.

Pressing the REC button will not start recording.

- The CFast card is full or it already contains the maximum number of clips (999 clips). Delete some clips (📖 147) or save your clips (📖 158) and initialize the CFast card (📖 51) to free some space. Alternatively, replace the CFast card.
- The REC button that was used may be disabled. Change the current settings in the MENU ▸ [System Setup] ❯ [REC Button] submenu to enable the use of the desired REC buttons.
- The camera cannot start recording when input power supplied to the camera reaches the level set for the power level warning (📖 195). Check the power source.
- You may not be able to start or stop recording while controls on the optional RC-V100 Remote Controller are being operated. Stop using the remote controller and then press the REC button.

The point where the REC button was pressed does not match the beginning/end of the recording.

- There is a slight interval between pressing the REC button and the actual start/end of recording. This is not a malfunction.

The camera will not focus.

- The camera may not be able to focus on certain subjects using autofocus. Focus manually (📖 90).
- When the AF mode is set to AF-boosted MF, start focusing manually until the AF frame changes to white (automatic adjustment range).
- The optional viewfinder is not adjusted. Use the dioptric adjustment ring to make the proper adjustment (📖 42).
- The lens is dirty. Clean the lens with a soft lens-cleaning cloth.

C700 C700 PL When a subject flits across in front of the lens, the image appears slightly bent.

- This is a phenomenon typical of CMOS image sensors. When a subject crosses very quickly in front of the camera, the image may seem slightly warped. This is not a malfunction.

Bright red, green or blue dots appear on the monitoring screen.

- Try adjusting the black balance (📖 54). The camera's CMOS sensor is a delicate piece of precision engineering. Direct exposure of the sensor to ion rays or other types of cosmic radiation may affect it and this may rarely appear as bright colored dots on the screen. This is the nature of CMOS image sensors and does not represent a malfunction.
- The effects of the damage may be more noticeable when the camera is used in places subject to high temperatures, when a high ISO speed or gain level is used and when slow shutter speeds are used.

Changing between recording (●REC) and record standby (STBY) takes longer than usual.

- When the recording media contains a large number of clips, some operations may take longer than usual. Save your clips (📖 158) and initialize the recording media (📖 51). Alternatively, replace the recording media.

The camera cannot record properly.

- This may occur as recordings are made and deleted over time. Save your clips (📖 158) and initialize the recording media (📖 51), using the [Complete] option for SD cards.

After using the camera for a long time, it becomes hot.

- The camera may become hot after using it continuously for long periods of time; this is not a malfunction. If the camera becomes unusually hot or it becomes hot after using it only for a short while, it may indicate a problem with the camera. Consult a Canon Service Center.

Playback

Cannot delete a clip.

- You cannot delete XF-AVC clips with an OK mark. Remove the OK mark (📖 147) to delete the clip.
- The LOCK switch on the SD card is set to prevent accidental erasure. Change the position of the LOCK switch.

Deleting clips takes longer than usual.

- When the recording media contains a large number of clips, some operations may take longer than usual. Save your clips (📖 158) and initialize the recording media (📖 51).

Cannot delete a photo.

- The LOCK switch on the SD card is set to prevent accidental erasure. Change the position of the LOCK switch.
- Photos that were protected using other devices cannot be deleted with the camera.

Indicators and Onscreen Displays

INFO appears in yellow on the control display.

- An error or other situation that requires your attention has been detected by the camera. Press the INFO button and check the information in the INFO ▸ [LIVE] screen (📖 198).

The tally lamp does not illuminate.

- Set MENU ▸ [System Setup] ❯ [LED] ❯ [Tally Lamp] ❯ [Camera] to [On].

The tally lamp flashes quickly in red. (4 flashes per second)

- The input voltage of the battery or power source connected to the DC IN 12V terminal is too low. Replace the power source.
- There is not enough available space on the CFast card. Delete some clips (📖 147) to free some space or replace the CFast card.
- A system error has occurred. Turn the camera off and then on again. If this does not solve the problem, consult a Canon Service Center.

The tally lamp flashes slowly in red. (1 flash per second)

- The combined available space on both CFast cards is low. Replace the CFast card that is not being recorded onto.

SD appears in red on the control display and monitoring screen.

- An SD card error occurred. Remove and reinsert the SD card. If the display does not change back to normal, save your recordings (📖 158) and initialize the SD card (📖 51).
- The SD card is full. Replace the SD card or delete some recordings (📖 147) to free some space on the SD card.

Even after stopping recording, the access indicator stays illuminated in red.

- The clip is being recorded on the card. This is not a malfunction.

🌡 appears in yellow on the control display and monitoring screen.

- The camera's internal temperature has reached a predetermined level. You can continue using the camera.

🌡 appears in red on the control display and monitoring screen.

- The camera's internal temperature has risen further while 🌡 appeared in yellow on the screen.
- If the fan mode (📖 63) is set to [Always On], turn off the camera and wait until the temperature has decreased.
- If the fan mode is set to [Automatic] and the fan was turned off while recording, the fan will turn on automatically (in that case, FAN will appear on the control display and monitoring screen).

LENS appears on the monitoring screen.

- The camera and lens cannot communicate normally. Clean the lens's contacts and reattach the lens.

Battery icon appears in red on the control display and monitoring screen

- The lithium button battery's charge is low. If you have not used the camera for more than a month the built-in backup battery may be completely depleted. To ensure the camera's settings are not lost, save the camera's settings on an SD card (📖 140) and replace the lithium button battery (📖 24). After checking that the warning icon does not appear any more, restore the camera's settings from the file saved on the SD card.

MAG appears in red on the monitoring screen.

- When ALT ▸ [F. ASSIST.] ❯ [OPTIONS] ❯ [Magnification] ❯ [Available While Rec] is set to [Off], the magnification function is not available while recording. Set [Available While Rec] to [On].

The aperture value (F or T) flashes on the control display and monitoring screen.

- When using a compatible EF Cinema lens (📖 221) or broadcast lens, the aperture value will start flashing when the camera detects that the aperture may be close to fully closed. As you continue to close down the aperture further, the display will change to [closed].

Picture and Sound

The optional viewfinder does not turn on.
- Make sure the unit cable connecting the camera's VIDEO terminal and the optional viewfinder's VIDEO terminal is correctly connected on both sides.

There is no image on an external monitor.
- The camera is not connected correctly to the external monitor. Make sure you are using the correct connection (□ 152).
- The video input on the external monitor is not set to the video terminal to which you connected the camera. Select the correct video input.

There is no picture or sound from an external monitor connected to an SDI OUT terminal.
- Set MENU ▸ [System Setup] ❯ [Term. Output Setup] ❯ [SDI OUT Output] to [On].
- Check that the external monitor's settings match the configuration of the output signal selected on the camera (□ 149).

There is no picture or sound from an external monitor connected to a MON. terminal.
- Set MENU ▸ [System Setup] ❯ [Term. Output Setup] ❯ [MON. Output] to an option other than [Off].
- Check that the external monitor's settings match the configuration of the output signal selected on the camera (□ 149).

There is no picture or sound from an external monitor connected to the HDMI OUT terminal.
- Disconnect the HDMI cable and then restore the connection or turn the camera off and then on again.
- When output from the MON. terminals is enabled (MENU ▸ [System Setup] ❯ [Term. Output Setup] ❯ [MON. Output] is set to an option other than [Off]), if the monitor is not compatible with the video output configuration, output from the HDMI OUT terminal will be turned off. Set [MON. Output] to [Off] or connect a monitor compatible with the HDMI OUT terminal's video output configuration.

The peaking/magnification/zebra pattern/waveform monitor/onscreen markers/false color display/B&W image does not appear on the monitoring screen, or the anamorphic desqueeze/LUT is not applied to it.
- Check that display of the desired assistance function is enabled on the screen used with the corresponding output settings.
- If output of the camera's onscreen displays is not enabled for the terminal used, enable it (□ 155).

Screen displays turn on and off repeatedly.
- The input voltage of the battery or power source connected to the DC IN 12V terminal is too low. Check the power source.
- Excess current to the lens has been detected. Remove the lens. Clean the contacts on the lens mount and lens and reattach the lens.

Abnormal characters appear on the monitoring screen and the camera does not operate properly.
- Disconnect the power source and reconnect it after a short time. If the problem still persists, use the MENU ▸ [System Setup] ❯ [Reset] ❯ [All Settings] function. This resets all the camera's settings to default values, except for the hour meter.

Video noise appears on the monitoring screen.
- Keep a distance between the camera and devices that emit strong electromagnetic fields such as near powerful magnets and motors, MRI machines or high-voltage power lines.

Horizontal bands appear on the monitoring screen.
- C700 C700 PL This is a phenomenon typical of CMOS image sensors when recording under some types of fluorescent, mercury or sodium lamps. This is not a malfunction. You may be able to reduce the symptoms by setting the shutter speed mode to [Speed] and the shutter speed to a value matching the frequency of the local electrical system: 1/50* or 1/100 for 50 Hz systems, 1/60 or 1/120 for 60 Hz systems.

  * May not be available depending on the frame rate.

Audio cannot be recorded.
- The audio input selection switch of the INPUT terminal is in the AES/EBU position but an analog audio source is connected, or it is set to the ANALOG position and a digital audio source is connected. Set the audio related switches correctly according to the audio source you wish to use (□ 110).
- The external analog microphone connected to the INPUT 1/INPUT 2 terminal requires phantom power. Set the corresponding INPUT terminal's ANALOG (analog audio source selection) switch to MIC+48V (□ 110).

Audio is recorded at an extremely low level.
- The audio recording level mode for the audio channels selected is set to manual (M or [Manual]) and the audio recording level is set too low. Check the audio level meter on the HOME screen, ALT ▸ [AUDIO] screen or on the monitoring screen and adjust the audio level correctly (□ 111).
- The microphone attenuator is on. Turn off the microphone attenuator (□ 113).

Sound is distorted or is recorded at lower levels.
- When recording near loud sounds (such as fireworks, shows or concerts), sound may become distorted or it may not be recorded at the actual levels. Activate the microphone attenuator (🕮 113), or adjust the audio recording level manually.

Recording Media and Accessories

Cannot insert the recording media.
- The CFast card or SD card you are trying to insert is not facing the correct direction. Turn it over and insert it.

Cannot record on the CFast card.
- A compatible CFast card must be used (🕮 48).
- Initialize the CFast card (🕮 51) when you use it with the camera for the first time.
- The CFast card is full or it already contains the maximum number of clips (999 clips). Delete some clips (🕮 147) to free some space or replace the CFast card.

Cannot record on the SD card.
- A compatible SD card must be used (🕮 48).
- Initialize the SD card (🕮 51) when you use it with the camera for the first time.
- The LOCK switch on the SD card is set to prevent accidental erasure. Change the position of the LOCK switch.
- The SD card is full. Delete some recordings (🕮 147) to free some space or replace the SD card.
- The folder and photo numbers have reached their maximum value. Set the MENU ▸ [Rec/Media Setup] ❯ [Photo Numbering] setting to [Reset] and insert a new SD card.

Recording to and playing back from a CFast card is slow.
- This may occur as video is recorded/deleted over time. Save your clips (🕮 158) and initialize the CFast card (🕮 51).

Recording to and playing back from an SD card is slow.
- This may occur as clips and photos are recorded/deleted over time. Save your recordings (🕮 158) and initialize the SD card using the [Complete] option (🕮 51).

The optional RC-V100 Remote Controller or commercially available remote control does not work.
- Make sure that MENU ▸ [System Setup] ❯ [REMOTE Term.] is set to [RC-V100 (REMOTE A)] or [RC-V100 (REMOTE B)] (depending on the connection used) when using the optional RC-V100 Remote Controller or to [Standard] when using a commercially available remote control.
- Turn off the camera, reconnect the remote controller and then turn the camera back on again.
- When editing of the custom picture file's detailed settings ([Other Settings] ❯ [Activate]) is not enabled or the currently selected custom picture file is protected, detailed custom picture settings cannot be adjusted using the RC-V100. Select a custom picture file that is not protected (🕮 131) and enable the editing of the custom picture file's detailed settings (🕮 131).

Network Functions

Check This First

- Are the access point (wireless router), camera, computer or other network devices all turned on?
- Is the network working and correctly configured?
- Are all network devices correctly connected to the same network as the camera?
- When using Wi-Fi networks:
  - Is the wireless file transmitter correctly attached to the camera's system extension terminal (🕮 160)?
  - Are there any obstructions between the camera and the access point or between the network device used and the access point?

Cannot connect with an access point.

- If the network function icon does not turn white, turn off the camera, remove the wireless file transmitter and attach it again (📖 160).
- Check that the settings on the network device the camera is trying to connect with are correct.
- Password information is not saved with the camera settings. When you load onto the camera settings from an SD card, all the passwords in the network-related settings are reset. Set up the network-related settings as necessary (📖 165).
- The wireless signal is not strong enough or there are other devices in the vicinity interfering with the wireless signal. Refer to *Precautions Regarding Wi-Fi Networks* (📖 205).

Cannot establish a Camera Access Point connection with a network device.

- If the network function icon does not turn white, turn off the camera, remove the wireless file transmitter and attach it again (📖 160).
- When you reset all the camera settings, all network settings are lost as well. Connect using the default settings or set up the Camera Access Point settings again (📖 161).
- The wireless signal is not strong enough or there are other devices in the vicinity interfering with the wireless signal. Refer to *Precautions Regarding Wi-Fi Networks* (📖 205).

Cannot connect with a wired (Ethernet) network.

- Use a category 5e or better shielded twisted pair (STP) Ethernet cable.
- Try replacing the Ethernet cable.
- When you reset all the camera settings, all network settings are lost as well. Connect using the default settings or set up the network settings again (📖 165).
- Check that the network device to which the camera is connected is on and functioning properly. To use 1000BASE-T connection speeds, make sure to use network devices compatible with Gigabit Ethernet (1000BASE-T).

The 品 (Ethernet) access indicator illuminates in red and then turns off.

- The Ethernet cable was disconnected or the camera cannot communicate with the connected network device. Check the Ethernet connection and the connected network device.

The Browser Remote application will not start on the Web browser.

- Make sure ALT ▸ [NETWORK] ❯ [Browser Remote] ❯ [ACTIVATE] is set to [On].
- The URL entered into the Web browser's address bar is incorrect. Be sure to use the URL exactly as it appears in the [Browser Remote] screen on the control display (📖 167). (You may need to scroll down with the SELECT dial to find the [URL] line.)

The Browser Remote screen is not displayed correctly on the Web browser.

- The device, operating system or Web browser used may not be supported. For the latest information about supported systems, visit your local Canon Web site.
- Enable JavaScript and cookies in your Web browser's settings. For details, refer to the help modules or online documentation of the Web browser used.

Cannot activate the IP streaming function.

- The main recording format is not set to [XF-AVC (CFast)]. Set it to [XF-AVC (CFast)] (📖 65).
- The system frequency is set to 24.00 Hz. Set it to 59.94 Hz or 50.00 Hz (📖 65).
- Slow & fast motion recording is activated. Turn it off (📖 68).
- If the IP streaming's [Protocol] is set to an option other than [RTSP+RTP], be sure to configure the receiver's IP address with the [Dest. IP Address] setting.

Precautions Regarding Wi-Fi Networks

When using a Wi-Fi network, try the following corrective actions if the transmission rate drops, the connection is lost, or other problems occur.

Location of the access point (wireless router)

- When using a Wi-Fi network indoors, place the access point in the same room where you are using the camera.
- Place the access point in an open, unobstructed location, where people or objects do not come between it and the camera.
- Place the access point as close as possible to the camera.

Nearby electronic devices

- If the transmission rate over a Wi-Fi network drops because of interference from the following electronic devices, switching to the 5 GHz band or to a different channel may solve the problem.
- Wi-Fi networks using the IEEE 802.11b/g/n protocol operate in the 2.4 GHz band. For this reason, the transmission rate may drop if there are nearby microwave ovens, cordless telephones, microphones, or similar devices operating on the same frequency band.
- If another access point operating on the same frequency band as the transmitter of the WFT-E6 or WFT-E8 connected to the camera is used nearby, the transmission rate may drop.

Using multiple cameras/wireless transmitters/access points
- Check that there are no IP address conflicts among the devices connected to the same network.
- If multiple C700 / C700 PL/ C700 GS PL cameras are connected to a single access point, connection speeds may be reduced.
- To reduce radio wave interference when there are multiple access points using IEEE 802.11b/g or IEEE 802.11n (in the 2.4 GHz band), leave a gap of four channels between each wireless access point. For example, use channels 1, 6, and 11, channels 2, 7, and 12, or channels 3, 8, and 13. If you can use IEEE 802.11a/n (in the 5 GHz band), switch to IEEE 802.11a/n and specify a different channel.

List of Messages

Refer to this section if a message appears in the INFO ▸ [LIVE] screen on the control display or on the monitoring screen. The messages in this section appear in alphabetical order. Note that for some messages, an indication of the recording media involved (CFast A, CFast B, SD, CDX, or a combination thereof) may appear above the message itself.
For error messages related to network functions, refer to *Network Functions* (209).

Accessing CFast A/CFast B/SD Do not remove
- You opened the CFast card slot cover or SD card slot cover while the camera was accessing the recording media. Close the card slot cover.

Buffer overflow. Recording was stopped.
- The data transfer rate was too high for the recording media in use and the recording was stopped. Use a recommended recording media (48).
- Save your recordings (158) and initialize the recording media (51).

Camera ⬌ Lens communication error. Clean the lens's contacts and reattach the lens.
- The camera cannot correctly communicate with the lens due to dirty lens contacts. After the message disappears, the LENS icon appears on the control display and monitoring screen. Clean the lens contacts with a soft cloth and reattach the lens.

Cannot play back
- The file control information of an XF-AVC clip is corrupted or there was a decoder error. Turn the camera off and then on again. If this does not solve the problem, consult a Canon Service Center.
  - Corrupted file control information cannot be recovered. Recording media or XF-AVC clips with corrupt file control information cannot be read by Canon XF Utility.

Cannot switch CFast card slots
- The SLOT SEL. button was pressed while the camera is recording. Wait until recording is finished to change the selected CFast card slot.

CFast A/CFast B/SD: Recommend checking the data and initializing
- The recording media cannot be used for any of the following reasons.
  - A problem has occurred with the recording media.
  - The camera cannot read the data on the recording media.
  - The recording media was initialized using a computer.
  - The recording media is partitioned.
- Save your clips (158) and initialize the recording media (51).

CFast A→CFast B / CFast B→CFast A Switched
- This message appears when you use the SLOT SEL. button to switch the CFast card slot in use or recording continued from one CFast card to the other.

CFast A→CFast B / CFast B→CFast A Will switch in a moment
- The CFast card is almost full so recording will continue on the other CFast card in approximately 1 minute.

Check the data.
- Cannot access the recording media. Check the recording media and make sure it is inserted correctly.
- A recording media error occurred. The camera cannot record or display the image. Try removing and reinserting the recording media, or use a different recording media.
- You inserted a MultiMedia Card (MMC) into the camera. Use a recommended SD card (48).
- If after the message disappears, A⃠, B⃠ or SD⃠ appears in red, perform the following: Turn off the camera and remove and reinsert the recording media. If A, B or SD turns back to green you can resume recording/playback. If the problem persists, save your recordings (158) and initialize the recording media (51).

Check the device connected to the camera's system extension terminal
- There is a problem with the optional accessory connected to the camera's system extension terminal. Try removing the accessory and attaching it again. If this does not solve the problem, consult a Canon Service Center.

Conditions exceed the range of color/brightness that can be set.
- The reference white could not be calibrated using a custom white balance. Place a gray card or white object with no pattern so it fills the center of the monitoring screen and try registering the custom white balance again.

Cover is open
- The CFast card slot cover or SD card slot cover was open when the camera was turned on or switched back from playback mode to shooting mode. Insert a card and close the card slot the cover.

Fan error
- The cooling fan may not be working properly. Consult a Canon Service Center.

File name error
- The clip number has reached its maximum value. Save your clips (🕮 158) and initialize the recording media (🕮 51) or delete all the clips (🕮 147).
- Photo numbers have reached their maximum value. Set MENU ▸ [Rec/Media Setup] ❯ [Photo Numbering] to [Reset] and delete all the photos on the SD card (🕮 147) or initialize it (🕮 51).

Invalid operation
- The following operations cannot be performed.
  - Adding an OK mark to a clip that already has an OK mark or adding a ✓ mark to a clip that already has a ✓ mark.
  - Pressing the REC button when there are no recording media in the camera.

Lens Firmware update error. Try to update the firmware again.
- The lens's firmware could not be correctly updated. Try updating the lens's firmware again.

Lens error Change the frame rate
- The lens attached to the camera is not compatible for shooting at the frame rate selected on the camera. Select a different the frame rate (🕮 65).

Lens error Turn the camera off, then on again.
- There was a communication error between the camera and the lens. Turn the camera off and then on again.

Low Power Warning Check the power supply.
- The input power supplied to the camera has reached the level set for the power level warning (🕮 195). Check the power source.
- The message appears every time you press the REC button when the power supply is too low (as described above).

Management file error
- Cannot record because the camera cannot write to the file control information. This may occur if the files on the recording media were accessed using another device. Save your clips (🕮 158) and initialize the recording media (🕮 51).

May not be possible to record clips on this media
- You may not be able to record clips on an SD card without a Speed Class rating or rated CLASS 2 or 4. Replace the SD card with one rated CLASS 6 or 10.

Media full
- The recording media is full. Delete some clips (🕮 147) to free some space or replace the recording media.
- CFast card A or CFast card B is full so recording will not start. Switch to the CFast card in the other CFast card slot to record.

Media is almost full
- The amount of available space on CFast card A and CFast card B combined is low. Replace the CFast card that is not selected.
- The amount of available space on the SD card is low. Replace the SD card or delete some recordings (🕮 147) to free some space on the SD card.

Media is not supported
- 512 MB or smaller CFast cards and 128 MB or smaller SD cards cannot be used with the camera. Use a recommended recording media (🕮 48).

Memory card is write-protected
- The LOCK switch on the SD card is set to prevent accidental erasure. Change the position of the LOCK switch.

No clips
- There are no clips on the recording media to play back. Clips must be recorded (🕮 55) in order to play them back.

No photos
- There are no photos on the SD card to play back. Photos must be taken (🕮 125) in order to view them.

Noise levels will rise on the image of the sub recording and on video outputs not in RAW.
- The main recording format is set to one of the RAW options and [Gamma] in the custom picture file is set to an option other than [Canon Log 2] or [Canon Log 3]. Under such conditions, there will be more noise on video recorded with sub recording clips on the CFast card and on video output from terminals other than the SDI OUT terminals. If you do not need t record RAW video, change the main recording format to one of the other options.

Number of clips already at maximum
- The recording media selected for recording already contains the maximum number of clips (999 clips). Replace the recording media or use the CFast card in the other CFast card slot.
- Because both CFast cards reached the maximum number of clips, double slot recording is not available.

Number of ND filters used has changed. Check the focus.
- When using ND filter settings in the extended range (8 stops or 10 stops), the number of ND filters used changes and this may result in a shift in focus. Check the focus before resuming shooting.

Recorded at 24.00 Hz/50.00 Hz/59.94 Hz CFast A/CFast B/SD: Recommend checking the data and initializing
- The recording media contains clips that were recorded using a system frequency different from the one currently used by the camera. To record on this card, save your clips (□ 158) and initialize the recording media with the camera (□ 51). To play back the recordings on the card, change the PLAY ▸ MENU ▸ [Rec/Media Setup] ❯ [System Frequency] setting to match the recordings on the recording media.

Recording was stopped.
- The file control information is corrupted or there was an encoder error. Turn the camera off and then on again. Then, remove the CFast card being used and reinsert it. Alternatively, replace the CFast card. If this does not solve the problem, consult a Canon Service Center.
  - Corrupted file control information cannot be recovered. Recording media or XF-AVC clips with corrupt file control information cannot be read by Canon XF Utility.

Remote OU-700 Firmware update error. Press the HOME button on the Remote OU-700 and wait a few moments.
- There was a problem while trying to update the optional OU-700 Remote Operation unit connected to the camera. Press the HOME button on the OU-700 and wait. While the OU-700's firmware is being updated do not remove the power supply or turn off the camera, do not disconnect the OU-700 and do not operate any buttons or controls on the camera or OU-700.

Replace the lithium button battery.
- The lithium button battery's charge is low. Save the camera's settings on an SD card (□ 140) and replace the lithium button battery (□ 24). Then, restore the camera's settings from the file saved on the SD card.

Some clips require data recovery
- The power may have been suddenly turned off or the recording media may have been removed while the camera was recording. As a result, one or more clips contain corrupted data. You can try to recover the clips (□ 53).

The video configuration was changed. Check the settings.
- Some of the video configuration settings (frame rate, resolution, color sampling, bit rate or shooting frame rate).

This function is not compatible with the current lens.
- The selected setting is not compatible with the lens currently attached to the camera and cannot be used.

This photo cannot be displayed
- You may not be able to display photos taken with other devices or image files created or edited on a computer.

Unable to recover data
- Could not recover the selected clip. Save your clips (□ 158) and delete the clips that could not be recovered (□ 147).
- The camera may not be able to recover clips when there is not enough space on the recording media. Delete some clips (□ 147) to free some space.

Network Functions

Along with this list, refer also to the instruction manuals of the access point or other external devices you are using. For simplicity's sake, in this section the optional WFT-E6 or WFT-E8 Wireless File Transmitter will be referred to simply as "the transmitter".

A User is already accessing the server. Try again later.

- This message appears on the screen of the connected device. Another device connected to the network is already operating the camera. To use this device, first end the connection on the device accessing the camera and then touch Retry.

Cannot log in to FTP server.

- Check the user name and password information in the FTP server settings (📖 181).

Cannot transfer files to FTP server.

- Check that there is enough available space in the data storage device (hard disk, etc.) that contains the destination folder on the FTP server.
- Check the user permissions/restrictions for accessing the FTP server.

Check the device connected to the camera's system extension terminal

- There's a hardware problem with the transmitter. Try turning the camera off, removing and reattaching the transmitter and then turning the camera on again. If the problem persists, consult a Canon Service Center.

Check the network configuration.

- The camera could not connect to the network using the current settings. Check that the network settings are correctly configured (📖 160, 164).

Cover is open

- The card slot cover was opened while the recording media was being accessed. Stop the Wi-Fi function in use and end the network connection.

FTP transfer error.

- An error occurred while transferring files to the FTP server. Turn then camera and the FTP server off and then on again and try again the FTP transfer.

Incorrect Wi-Fi password.

- The authentication/encryption method is set to an option other than [Open/No encryption] and the password entered is incorrect. Check the access point's password and try entering the password again (📖 163).

IP address conflict

- Another device on the same network has the same IP address assigned to the camera. Change the IP address of the conflicting device or the camera.

LAN cable not connected.

- You attempted to connect to a wired network but the Ethernet cable is not connected. Check that the Ethernet cable is correctly connected to the camera's 品 (Ethernet) terminal and to the LAN/Ethernet port on the network device.

Multiple access points detected. Try the operation again.

- There are multiple access points sending out a WPS signal at the same time. Try the operation again later or perform setup using the [WPS: PIN Code] or [Search for Access Points] option (📖 163).

No access points found

- The camera searched for active Wi-Fi networks (access points) in the area but none were found. Make sure the access point is working correctly and try connecting again.
- The access point is operating in stealth mode. Deactivate the stealth function in the wireless router (access point) settings.
- The camera may not be able to find the access point if MAC address filtering is activated. Check the camera's (or transmitter's) MAC address with the [OPTIONS] ❯ [Check MAC Address] setting from any network function's screen. Make sure to add this MAC address to the list of approved wireless devices in the wireless router (access point) settings.

Reached the end of the adjustment range

- While adjusting the focus remotely using Browser Remote, the lens reached the proximal focus end or infinity focus end.

Unable to complete WPS.

- The access point's encryption method is set to WEP. Wi-Fi Protected Setup (WPS) cannot connect to access points set to this encryption method. Change the access point's encryption method or use another connection method (📖 160).

Unable to complete WPS. Try the operation again.

- More than 2 minutes passed between activating WPS on the access point and pressing [OK]/pressing SET on the camera. Start over the WPS procedure from the beginning.
- The WPS button was not held down long enough. Refer to the instruction manual of your wireless router. When using WPS to make a wireless connection, keep the WPS button held down until the wireless router's WPS function is activated.

Unable to connect

- Could not connect to the access point or network device selected.
- Cordless phones, microwave ovens, refrigerators and other appliances may interfere with the wireless signal. Try using the camera in a location farther away from such appliances.

Unable to obtain an IP address

- If you are not using a DHCP server, enter the IP address manually (🕮 165).
- Turn on the DHCP server. If it is already on, make sure it is functioning properly.
- Make sure the address range for the DHCP server is sufficient.

WFT's temperature too high. Cannot use Wi-Fi.

- Wi-Fi functions have been turned off because the transmitter's temperature is too high. Remove the transmitter from the camera and let it cool down before attaching it again.

Wi-Fi authentication unsuccessful

- Check the access point's authentication/encryption method and password (encryption key) and change the camera Wi-Fi settings (🕮 160) as necessary.

Wi-Fi error. Incorrect authentication method.

- Check the access point's authentication/encryption method and change the camera Wi-Fi settings (🕮 160) as necessary.

Wi-Fi error. Incorrect encryption method.

- Make sure the camera and access point are using the same authentication/encryption method.

Handling Precautions and Safety Instructions

Be sure to read these instructions in order to operate the product safely. Follow these instructions to prevent injury or harm to the operator of the product or others.

⚠ WARNING

Denotes the risk of serious injury or death.

- Stop using the product in any case of unusual circumstances such as the presence of smoke or a strange smell.
- Do not touch any exposed internal parts.
- Do not get the product wet. Do not insert foreign objects or liquids into the product.
- Do not touch the product connected to a power outlet during lightning storms. This may cause electric shock.
- Do not disassemble or modify the product.
- Do not expose the product to strong shocks or vibration.
- Use only power sources specified in this instruction manual for use with the product.
- Do not use the product if the power plug is not fully inserted into the power outlet.
- Do not unplug the product by pulling the power cord.
- Do not plug in or unplug the product with wet hands.
- Do not place heavy objects on the power cord. Do not damage, break or modify the power cord.
- Do not leave the product connected to a power source for long periods of time.
- Observe the following instructions when using commercially available batteries or provided battery packs.
  - Do not use leaking batteries/battery packs. If a battery/battery pack leaks and the material contacts your skin or clothing, flush the exposed area thoroughly with running water. In case of eye contact, flush thoroughly with copious amounts of clean running water and seek immediate medical assistance.
  - Do not heat batteries or expose them to fire.
  - Do not expose the terminals to dirt or let them come into contact with metallic pins or other metal objects.
- Do not look through the viewfinder at strong light sources such as the sun on a bright day or lasers and other strong artificial light sources.
- Do not leave a lens or a camera/camcorder with a lens attached, exposed without the lens cap attached. The lens may concentrate the light and cause fire.
- Do not wrap the product in cloth or other materials when in use or shortly after use when the product is still warm in temperature.
- Do not allow the product to maintain contact with the same area of skin for extended periods of time during use. This may result in low-temperature contact burns, including skin redness and blistering, even if the product does not feel hot. The use of a tripod or similar equipment is recommended when using the product in hot places and for people with circulation problems or less sensitive skin.
- Keep the product out of the reach of young children.
- Periodically remove any dust buildup from the power plug and power outlet using a dry cloth.
- Follow any indications to turn off the product in places where its use is forbidden. Not doing so may cause other equipment to malfunction due to the effect of electromagnetic waves and even result in accidents.

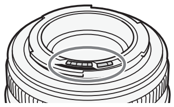
⚠ CAUTION

Denotes the risk of injury.

- Do not leave the product in places exposed to extremely high or low temperatures. The product may become extremely hot/cold and cause burns or injury when touched.
- Only mount the product on a tripod that is sufficiently sturdy.

Camera

- Do not use or store the camera in dusty or sandy places. The camera is not waterproof – avoid also water, mud or salt. If any of the above should get into the camera it may damage the camera and/or the lens. Consult a Canon Service Center as soon as possible.
- Be careful to avoid dust and dirt particles accumulating on the lens or entering the camera. When you finish using the camera, make sure to attach the body cap to the lens mount and the lens cap and dust cap to the lens.
- Do not use the camera near strong electromagnetic fields such as near powerful magnets and motors, MRI machines or high-voltage power lines. Using the camera in such places may cause anomalies in the video, or audio or video noise to appear.
- Do not point the camera or optional viewfinder toward an intense light source, such as the sun on a sunny day or an intense artificial light source. Doing so may damage the image sensor or the camera's internal components. Be careful especially when using a tripod. When you are not using the camera, make sure to attach the lens cap to the lens.
- Do not touch the lens contacts on the lens mount. Dirty contacts may cause a poor contact between the camera and the lens resulting in incorrect operation of the camera. After removing the lens, make sure to attach the body cap to the lens mount and the lens cap and dust cap to the lens.



Long-term storage
If you do not intend to use the camera for a long time, store it in a place free of dust, in low humidity, and at temperatures not higher than 30 °C (86 °F).

Power Sources

- Dirty terminals may cause a poor contact between a battery and the camera. Wipe the terminals on the supplied battery adapter for V-mount batteries with a soft dry cloth.

Lithium Button Battery

WARNING!

- The battery used in this device may present a fire or chemical burn hazard if mishandled.
- Do not disassemble, modify, immerse in water, heat above 100 °C (212 °F) or incinerate the battery.
- Do not insert the battery into the mouth. If swallowed, seek medical assistance immediately. The battery case may break and the battery fluids may cause internal injuries.
- Keep the battery out of the reach of children.
- Do not recharge, short-circuit or insert the battery in the wrong direction.
- Dispose of the used battery according to applicable recycling regulations. In Europe, the used battery should be returned to the supplier for safe disposal.

- Do not pick up the battery using tweezers or other metal tools, as this will cause a short circuit.
- Wipe the battery with a clean dry cloth to ensure proper contact.
- For CA, USA only
  Included lithium battery contains Perchlorate Material - special handling may apply.
  See www.dtsc.ca.gov/hazardouswaste/perchlorate/ for details.

Recording Media

- We recommend backing up the recordings on the recording media onto your computer. Data may be corrupted or lost due to defects or exposure to static electricity. Canon shall not be liable for lost or corrupted data.
- Do not touch or expose the terminals to dust or dirt.
- Do not use recording media in places subject to strong magnetic fields.
- Do not leave recording media in places subject to high humidity and high temperature.
- Do not disassemble, bend, drop, or subject recording media to shocks and do not expose them to water.
- Check the direction before inserting the recording media. Forcing recording media into the slot if it is not correctly oriented may damage the recording media or the camera.
- Do not attach any labels or stickers on the recording media.

Disposal

When you delete data on the recording media, only the file allocation table is altered and stored data is not physically erased. Take the necessary precautions when you dispose of the recording media, for example by physically damaging it to prevent the leakage of private data.
If giving the recording media to another person, initialize it (using the [Complete] initialization option for SD cards, 🕮 51). Fill it up with unimportant recordings, and then initialize it again. This makes recovering the original recordings very difficult.

Maintenance/Others

Cleaning

Camera body

- Use a soft, dry cloth to clean the camera's body. Never use chemically treated cloths or volatile solvents such as paint thinner.

Lens

- Remove any dust or dirt particles using a non-aerosol type blower brush.
- Use a clean, soft lens-cleaning cloth to gently wipe the lens. Never use tissue paper.

Control display

- Clean the screen using a clean, soft lens-cleaning cloth and commercially available cleaning fluid for eyeglasses.
- Condensation may form on the surface of the screen when the temperature changes suddenly. Wipe it with a soft dry cloth.

Condensation

Moving the camera rapidly between hot and cold temperatures may cause condensation (water droplets) to form on its internal surfaces. Stop using the camera if condensation is detected. Continued use may damage the camera.

Condensation may form in the following cases:

- When the camera is moved quickly from cold to warm places
- When the camera is left in a humid room
- When a cold room is heated rapidly

To avoid condensation

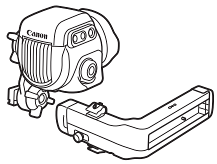
- Do not expose the camera to sudden or extreme changes in temperature.
- Remove the recording media and battery. Then, place the camera in an airtight plastic bag and let it adjust gradually to temperature changes before removing it from the bag.

When condensation is detected

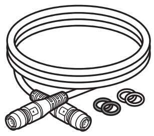
The precise time required for water droplets to evaporate will vary depending on the location and weather conditions. As a general rule, wait for 2 hours before resuming use of the camera.

Optional Accessories

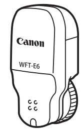
The following optional accessories are compatible with this camera. The availability differs from area to area.



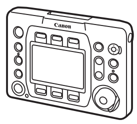
EVF-V70 OLED
Electronic Viewfinder



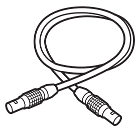
UN-5 (50 cm, 1.6 ft.) or
UN-10 (1 m, 3.3 ft.) Unit Cable



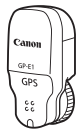
WFT-E6 or WFT-E8
Wireless File Transmitter



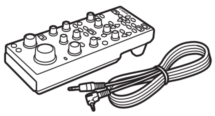
OU-700 Remote
Operation Unit



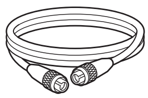
UC-V75 (75 cm, 2.5 ft.) or
UC-V1000 (10 m, 32.8 ft.)
Remote Operation Unit Cable



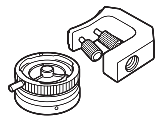
GP-E1 GPS Receiver



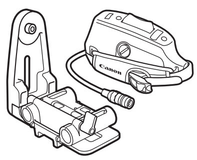
RC-V100
Remote Controller



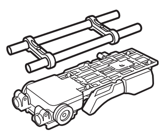
RR-10 (10 m, 32.8 ft.) or
RR-100 (100 m, 328 ft.)
8-pin Remote Cable



MO-4E or MO-4P
B4 Mount Adapter



SG-1 Shoulder Style
Grip Unit



SU-15 Shoulder Support Unit

For our customers in the USA: Call or visit your local retailer/dealer for genuine Canon video accessories. You can also obtain genuine accessories for your Canon camera by calling: 1-800-828-4040, Canon U.S.A. Information Center.

This mark identifies genuine Canon video accessories. When you use Canon video equipment, we recommend Canon-brand accessories or products bearing the same mark.

NOTES

- You can have the camera's EF lens mount with Cinema Lock replaced by a PL lens mount. For details, consult the retail dealer from whom you purchased the camera or contact a Canon Service Center.
- You can have the C700 model changed into a C700 PL or C700 GS PL model. For details, consult the retail dealer from whom you purchased the camera or contact a Canon Service Center.

Specifications

C700 / C700 PL / C700 GS PL

System

- Recording System
  Movies: Video compression: MPEG-4 AVC/H.264, Intra-frame or Long GOP
  Apple ProRes
  Audio compression: Linear PCM, 24 bit, 48 kHz, 4 channels
  File format: MXF, Apple QuickTime File Format
  Photos: DCF (Design rule for Camera File system), compatible with Exif Ver. 2.3, JPEG compression

- Video Configuration (recording/playback)
  Recordings on the CFast card:
  Format: XF-AVC (main recording/sub recording), ProRes (main recording)
  Bit rate (XF-AVC): 810 Mbps, 440 Mbps, 410 Mbps, 360 Mbps, 310 Mbps, 225 Mbps, 210 Mbps, 170 Mbps, 160 Mbps (Intra-frame); 50 Mbps (Long GOP)
  Codec (ProRes): Apple ProRes 4444, ProRes 422 HQ, ProRes 422
  Resolution: 4096x2160, 3840x2160, 2048x1080, 1920x1080
  Color sampling: YCbCr 4:2:2, 10 bit; RGB 4:4:4, 12 bit; RGB 4:4:4, 10 bit
  Frame rate: 59.94P, 59.94i, 50.00P, 50.00i, 29.97P, 23.98P, 25.00P, 24.00P
  Recordings on the SD card:
  Format: XF-AVC Proxy (sub recording)
  Bit rate: 35 Mbps, 24 Mbps (Long GOP)
  Resolution: 2048x1080, 1920x1080
  Color sampling: YCbCr 4:2:0, 8 bit
  Frame rate: 59.94P, 59.94i, 50.00P, 50.00i, 29.97P, 23.98P, 25.00P, 24.00P

- Recording Media (not included)
  For approximate recording times, refer to *Approximate Recording Times* (228)
  Main recording/sub recording: CFast 2.0 card (2 slots)
  Sub recording and photos[1]: SD, SDHC (SD High Capacity) or SDXC (SD eXtended Capacity) memory card
  [1] Custom picture files, camera settings and user memo files can be saved on and read from the SD card as well.

- Image Sensor
  C700 C700 PL Super 35mm-equivalent CMOS sensor
  C700 GS PL Super 35mm-equivalent CMOS sensor with global electronic shutter
  Effective pixels:
  When the resolution is 4096x2160 or 2048x1080: approx. 8,850,000 pixels (4096x2160)
  When the resolution is 3840x2160 or 1920x1080: approx. 8,290,000 pixels (3840x2160)
  When the main recoding format is [RAW (CDX Capture Drive)]:
  C700 C700 PL approx. 10,720,000 pixels (4512x2376)
  C700 GS PL approx. 10,150,000 pixels (4272x2376)

- Control Display
  7.66 cm (3.0 in.) color LCD, approx. 1,036,000 dots, aspect ratio 3:2

- Lens Mount
  C700 Canon EF mount with Cinema Lock compatible with Canon EF lenses (including EF-S lenses and EF Cinema lenses)
  C700 PL C700 GS PL PL mount compatible with Canon EF Cinema lenses with PL mount and Cooke's /i Technology
  Lens multiplication factor for 35mm equivalent focal length (approximate):
  When the resolution is 4096x2160, 2048x1080: 1.460
  When the resolution is 3840x2160, 1920x1080: 1.534

- **Lens Correction**
  Peripheral illumination/chromatic aberration correction is available for Canon EF lenses, EF Cinema lenses and broadcast lenses[2]
  [2] Some lenses are not compatible with in-camera correction.
- **Shutter Speed**
  Speed (1/3-stop increments or 1/4-stop increments), angle, clear scan, slow, off
- **Iris**
  Manual (1/2-stop increments or 1/3-stop increments, fine adjustment available), push auto iris, automatic aperture
- **ISO Speed**
  C700 C700 PL ISO 100 to ISO 102400 C700 GS PL[3] ISO 200 to ISO 102400 (1-stop or 1/3-stop increments)
- **Gain**
  C700 C700 PL –6 dB to 54 dB, C700 GS PL[3] –6 dB to 48 dB (3-dB increments),
  C700 C700 PL –2 dB to 54 dB, C700 GS PL[3] –2 dB to 48 dB (fine adjustment in 0.5-dB increments)
  [3] When slow & fast motion recording is not activated.
- **ND Filter:** Built-in (Off, 2, 4, 6, 8 or 10 stops), motor operated
- **Exposure:** AE shift, light metering modes (standard, spotlight, backlight)
- **White Balance**
  Auto white balance (AWB); custom white balance (2 sets, A and B); user-set white balance (5 settings, 2,000 K to 15,000 K); two preset settings (daylight, 5,600 K[4] and tungsten lamp, 3,200 K[4])
  Color temperature and color compensation (CC) adjustment available for all settings except AWB.
  [4] Color temperatures are approximate and given for reference purposes only.
- **Focus**
  Manual focus
  C700 only: Also autofocus (one-shot AF, AF-boosted MF, continuous AF); face AF and subject tracking available
  C700 AF type: Dual Pixel CMOS AF, contrast-detection AF
- **Sensor Sensitivity (ISO 800, 2000 lux, 89.9% reflection)**
  59.94 Hz: C700 C700 PL F10 C700 GS PL F14 (2048x1080 at 59.94P)
  50.00 Hz: C700 C700 PL F11 C700 GS PL F16 (2048x1080 at 50.00P)
- **S/N Ratio (Typical, using Canon Log 2, 1600% dynamic range)**
  68 dB (1920x1080 at 29.97P (59.94 Hz) or 25.00P (50.00 Hz), C700 C700 PL ISO 800, C700 GS PL ISO 1600)
- **Subject Illumination (ISO 25600, with a f/1.2 lens, 100% output)**
  59.94 Hz: 0.45 lux (shutter speed 1/30)
  50.00 Hz: 0.38 lux (shutter speed 1/25)
- **Built-In Microphone:** Monaural electric condenser microphone
- **Size of Photos:** 2048x1080, 1920x1080

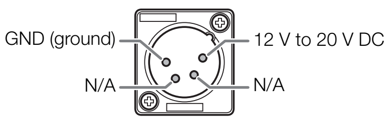
Terminals

- **SDI OUT Terminals (SDI OUT 1 to SDI OUT 4) / MON. Terminals (MON. 1 and MON. 2)**
  BNC jack, output only, 0.8 Vp-p / 75 Ω, unbalanced
  3G-SDI: SMPTE 424, SMPTE 425, SMPTE ST 299-2
  HD-SDI: SMPTE 292, SMPTE ST 299-1
  Embedded audio, time code (VITC/LTC)
  LUT (BT.709, BT.2020, DCI, HDR (SMPTE ST 2084), ACESproxy) and supplemental displays* (superimposed onscreen displays, peaking, zebra pattern, magnification, B&W image, waveform monitor, false color display, anamorphic desqueeze) can also be output.
  * MON. terminals only.

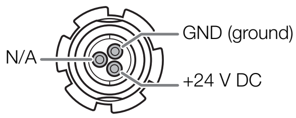
- HDMI OUT Terminal
  HDMI connector, output only
  LUT (BT.709, BT.2020, DCI, HDR (SMPTE ST 2084), ACESproxy) and supplemental displays (superimposed onscreen displays, peaking, zebra pattern, magnification, B&W image, waveform monitor, false color display, anamorphic desqueeze) can also be output.
- VIDEO Terminal
  Proprietary connector for the optional EVF-V70 OLED Electronic Viewfinder, output only
  LUT (BT.709, SMPTE ST 2084 Assistance (400% or 1600%)) and supplemental displays (superimposed onscreen displays, peaking, zebra pattern, magnification, B&W image, waveform monitor, false color display, anamorphic desqueeze) can also be output.
- INPUT Terminals (INPUT 1 and INPUT 2)
  XLR 3-pin jack (pin1: shield, pin2: hot, pin3: cold), 2 sets, balanced
  <u>Analog Inputs</u>
  Sensitivity:
  MIC setting: –60 dBu (volume center, full scale –18 dB) / 600 Ω
  LINE setting: 4 dBu (volume center, full scale –18 dB) / 10 kΩ
  Microphone attenuator: 20 dB
  <u>Digital Inputs (AES/EBU)</u>
  AES3 standard (48 kHz, 24 bit, 2ch) / 110 Ω
- MIC Terminal
  ∅ 3.5 mm stereo mini-jack, –72 dBV (volume center, full scale –18 dB) / 1.2 kΩ
  Microphone attenuator: 20 dB
- (Headphone) Terminal
  ∅ 3.5 mm stereo mini-jack, –∞ to –8 dBV (16 Ω load, volume range Min to Max) / 50 Ω or less
- GENLOCK/SYNC OUT Terminal
  BNC jack, 1.0 Vp-p / 75 Ω
  GENLOCK setting: input only; SYNC OUT setting: output only, tri-level HD signal
- TIME CODE IN/OUT Terminal
  BNC jack, input/output
  Input setting: 0.5 Vp-p to 18 Vp-p / 100 kΩ; Output setting: 1.3 Vp-p / 50 Ω or less
- REMOTE A Terminal, REMOTE B Terminal
  REMOTE A: ∅ 2.5 mm stereo sub-mini jack
  REMOTE B: Circular 8-pin jack (for the optional RC-V100 Remote Controller, RS-422 interface)
- CTRL Terminal
  LEMO circular 7-pin jack (for the optional OU-700 Remote Operation Unit)
- (Ethernet) Terminal
  Ethernet, 1000BASE-T compatible
- LENS Terminal
  Circular 12-pin jack (12-pin serial interface)
- System Extension Terminal
  Proprietary connector for optional accessories

Power/Others

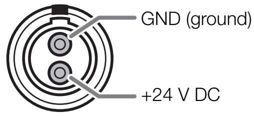
- Compatible Batteries
  V-mount batteries, rated input: 14.8 V DC (acceptable range: 12 V to 20 V DC)
- DC IN 12V Terminal
  XLR 4-pin jack (male connector), rated input: 12 V DC (acceptable range: 11.5 V to 20 V DC), 10 A (acceptable maximum load current)



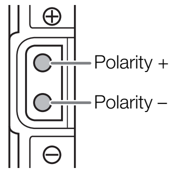
- DC OUT 24V 2A Terminal
  Fischer 3-pin connector, rated output: 24 V DC,
  maximum current: 2.0 A



- DC OUT 12V 2A Terminal
  LEMO 2-pin connector, rated output: 12 V DC,
  maximum current: 2.0 A



- D-TAP Terminal
  D-Tap connector, maximum output: 50 W (nominal)



- Power Consumption
  (using the EF 24-70mm f/2.8L II USM lens, with the optional viewfinder connected and activated, video output from the SDI OUT terminals and MON. terminals activated, and without supplying power to other accessories*)
  49.3 W (XF-AVC, 4K recording at 59.94P or 50.00P),
  59.1 W (ProRes 422 HQ, 4K recording at 29.97P or 25.00P)
  * When the camera is powering external accessories, power consumption will increase by the amount consumed by the connected accessories.
- Operating Temperature: 0 – 40 °C (32 – 104 °F)
- Dimensions (W x H x D)*
  Camera body only: C700 167 x 154 x 327 mm (6.6 x 6.1 x 1.1 in.),
  C700 PL C700 GS PL 167 x 154 x 336 mm (6.6 x 6.1 x 1.1 in.)
  For detailed technical drawings see the appendix *Camera Dimensions* (□ 223).
  * All dimensions are approximate.
- Weight **
  Camera body only: C700 3,440 g (7.6 lb.), C700 PL C700 GS PL 3,600 g (7.9 lb.)
  Camera with handle, clamp base and microphone holder: C700 3,900 g (8.6 lb.),
  C700 PL C700 GS PL 4,060 g (9.0 lb.)

  **All weights are approximate.

Weight and dimensions are approximate. Errors and omissions excepted.
The information in this manual is verified as of December 2016. Subject to change without notice.

Appendix: Compatible Lenses and Functions

Following is a list of lenses compatible with this camera and the various functions that can be used depending on the lens. Depending on the lens's purchase date, you may need to update the lens's firmware to use these functions. For details, consult a Canon Service Center.

Lens	12-pin interface cable	B4 mount adapter[1]	Iris control from the camera			Zoom control from the camera
			Manual	Push auto iris	Automatic	
EF lenses			●	●	–	–
EF lenses compatible with auto iris			●	●	●	–
EF Cinema lenses						
CN7x17 KAS S/E1	Required[2]		●	●	●	●
CN7x17 KAS S/P1	Required		●	●	●	●
CN20x50 IAS H/E1	Required[2]		●	●	●	●
CN20x50 IAS H/P1	Required		●	●	●	●
CN-E18-80mm T4.4 L IS KAS S (available soon)			●	●	●	●
Prime lenses compatible with Dual Pixel Focus Guide			–	–	–	–
Broadcast lenses	Required	Required	●	●	●	●

Lens	Focus control from the camera					Focus guide[3]
	Manual	One-shot AF[3]	Continuous AF[3]	Face AF[3]	Tracking[3]	
EF lenses	●	●	●	●	●	●
EF lenses compatible with auto iris	●	●	●	●	●	●
EF Cinema lenses						
CN7x17 KAS S/E1	●	●	●	●	●	●
CN7x17 KAS S/P1	●	–	–	–	–	–
CN20x50 IAS H/E1	●	–	–	–	–	–
CN20x50 IAS H/P1	●	–	–	–	–	–
CN-E18-80mm T4.4 L IS KAS S (available soon)	●	●	●	●	●	●
Prime lenses compatible with Dual Pixel Focus Guide	–	–	–	–	–	●
Broadcast lenses	●	–	–	–	–	–

[1] Optional MO-4E or MO-4P B4 Mount Adapter.
[2] If the lens's drive unit is powered from an independent power source, the connection to the camera is not required.
[3] C700 only.

- Broadcast lenses:

  HJ14ex4.3B IASE S
  HJ17ex7.6B IASE S
  HJ18ex7.6B IASE S
  HJ22ex7.6B IASE S
  HJ24ex7.5B IASE S

- EF lenses compatible with auto iris:

  EF-S 10-18mm f/4.5-5.6 IS STM
  EF-S 18-55mm f/3.5-5.6 IS STM
  EF 24-105mm f/3.5-5.6 IS STM
  EF-S 18-135mm f/3.5-5.6 IS STM
  EF-S 55-250mm f/4-5.6 IS STM
  EF-S 18-135mm f/3.5-5.6 IS USM

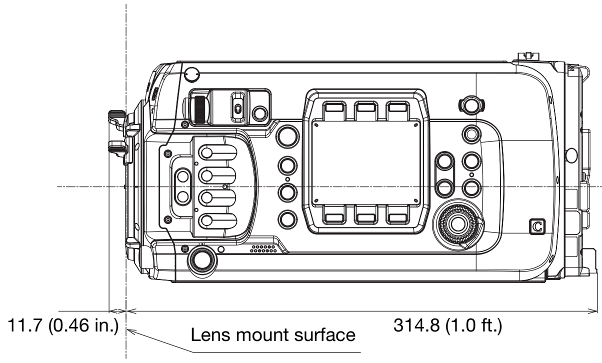
- Prime lenses compatible with the Dual Pixel Focus Guide function:

  CN-E14mm T3.1 L F
  CN-E24mm T1.5 L F
  CN-E35mm T1.5 L F
  CN-E50mm T1.3 L F
  CN-E85mm T1.3 L F
  CN-E135mm T2.2 L F

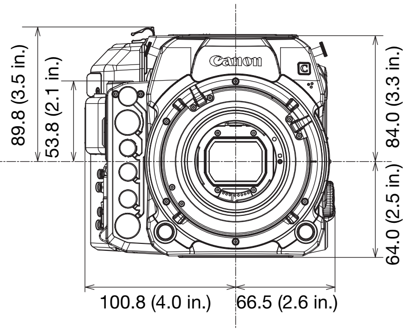
Appendix: Camera Dimensions

All measurements are in mm (inch measurements are given in parentheses).

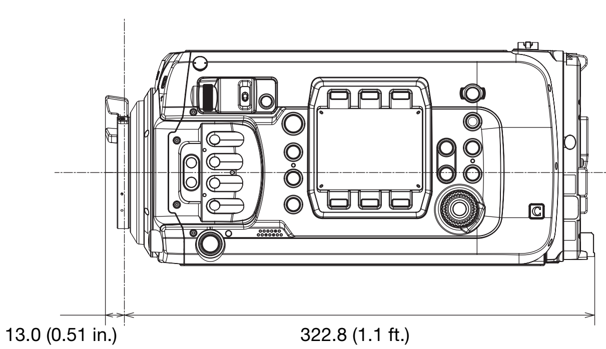
Left side view C700



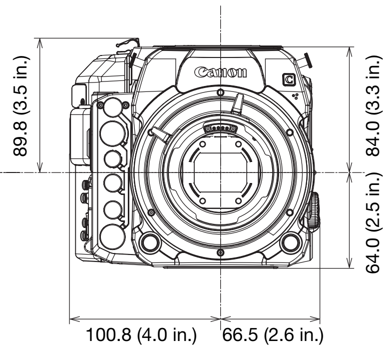
Front view C700



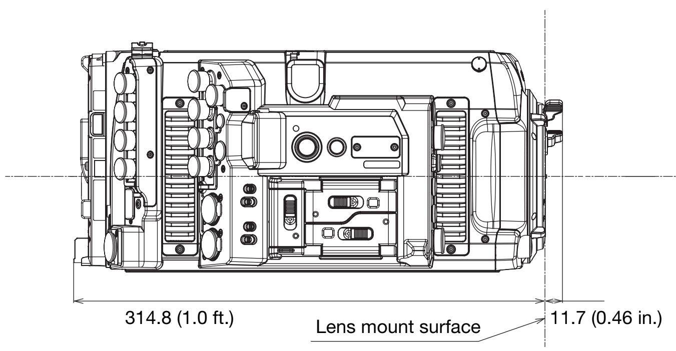
Left side view C700 PL C700 GS PL



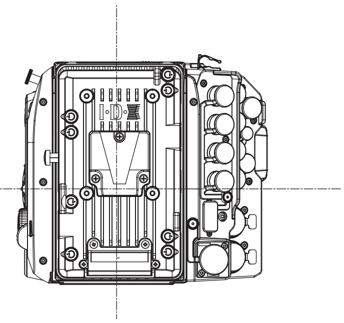
Front view C700 PL C700 GS PL



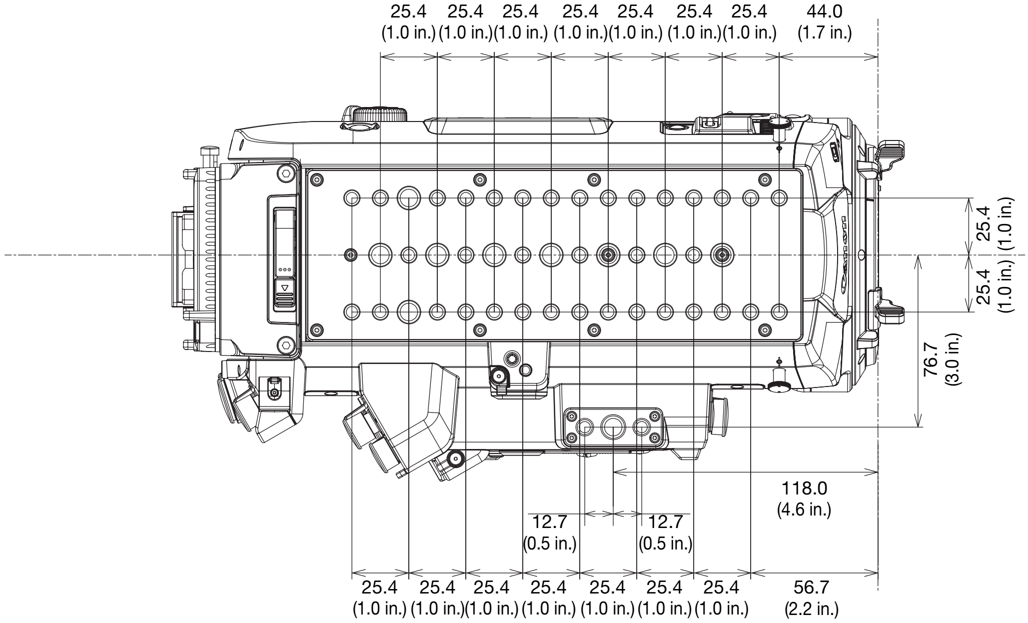
Right side view



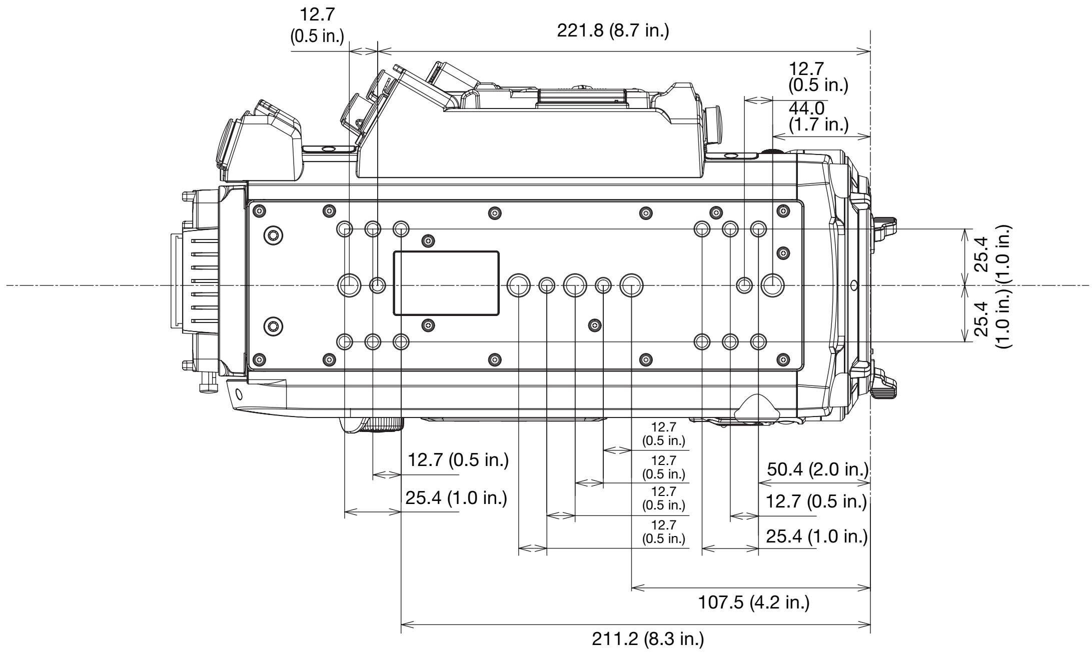
Back view



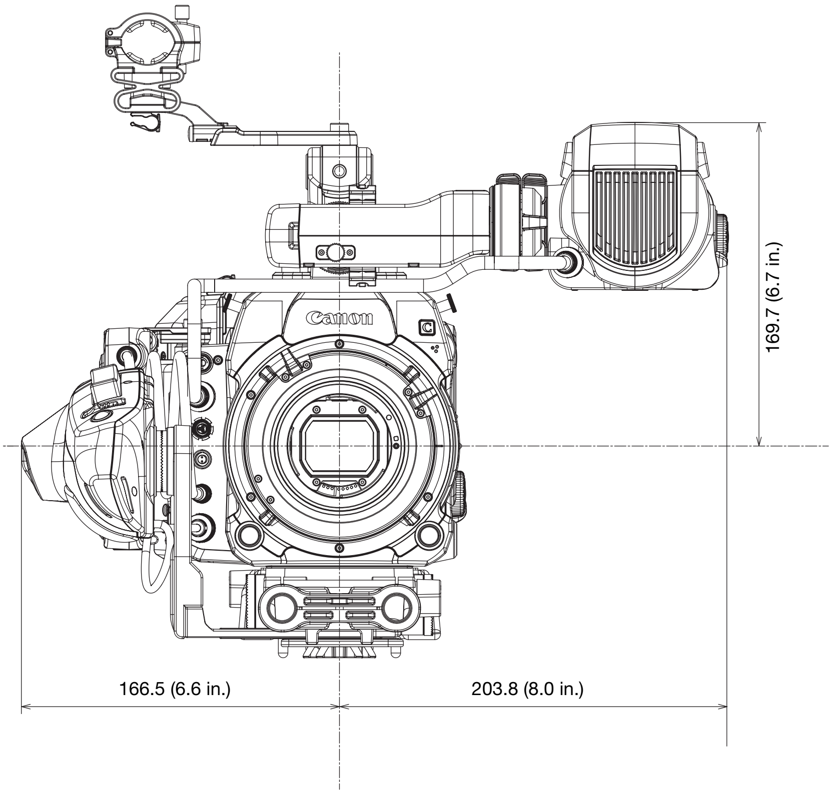
Top view



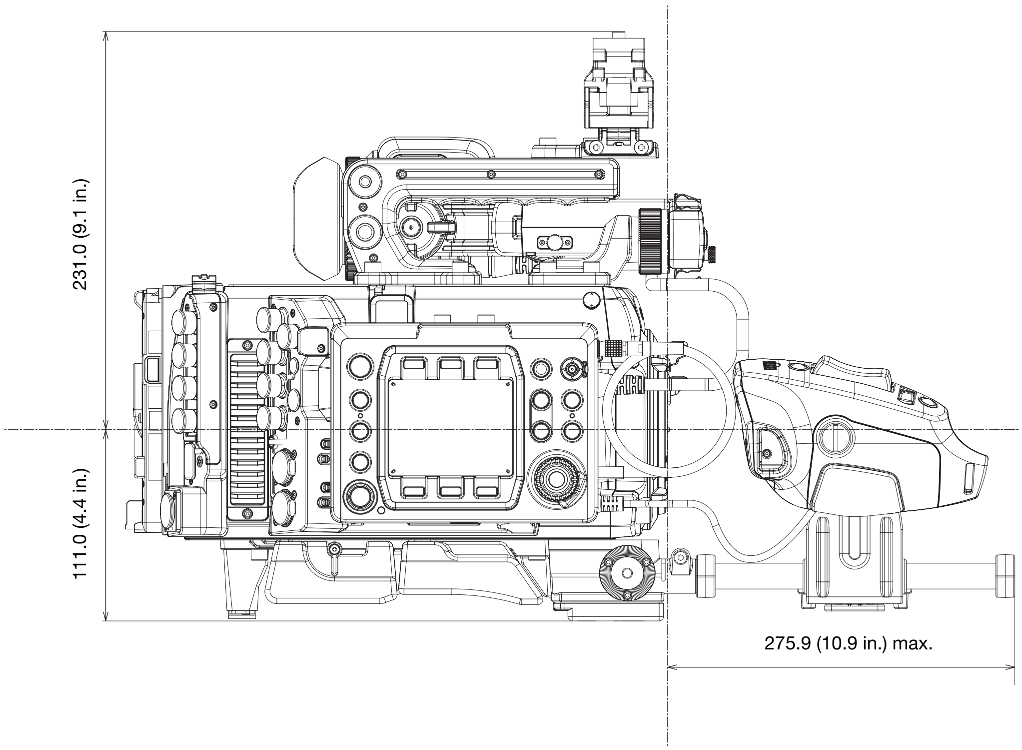
Bottom view



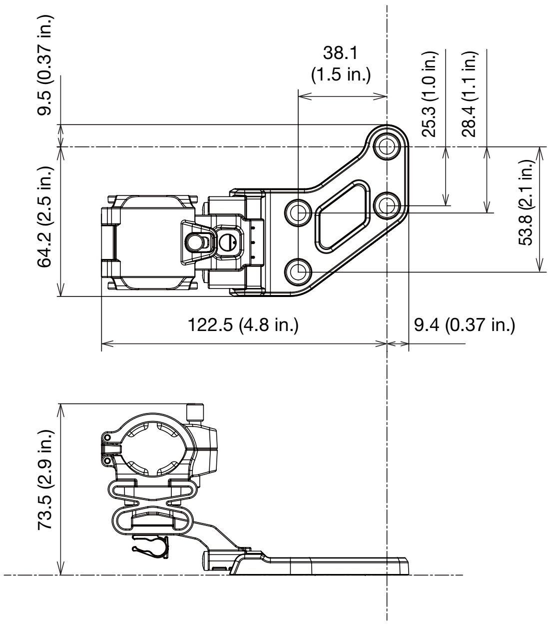
Front view (with accessories)



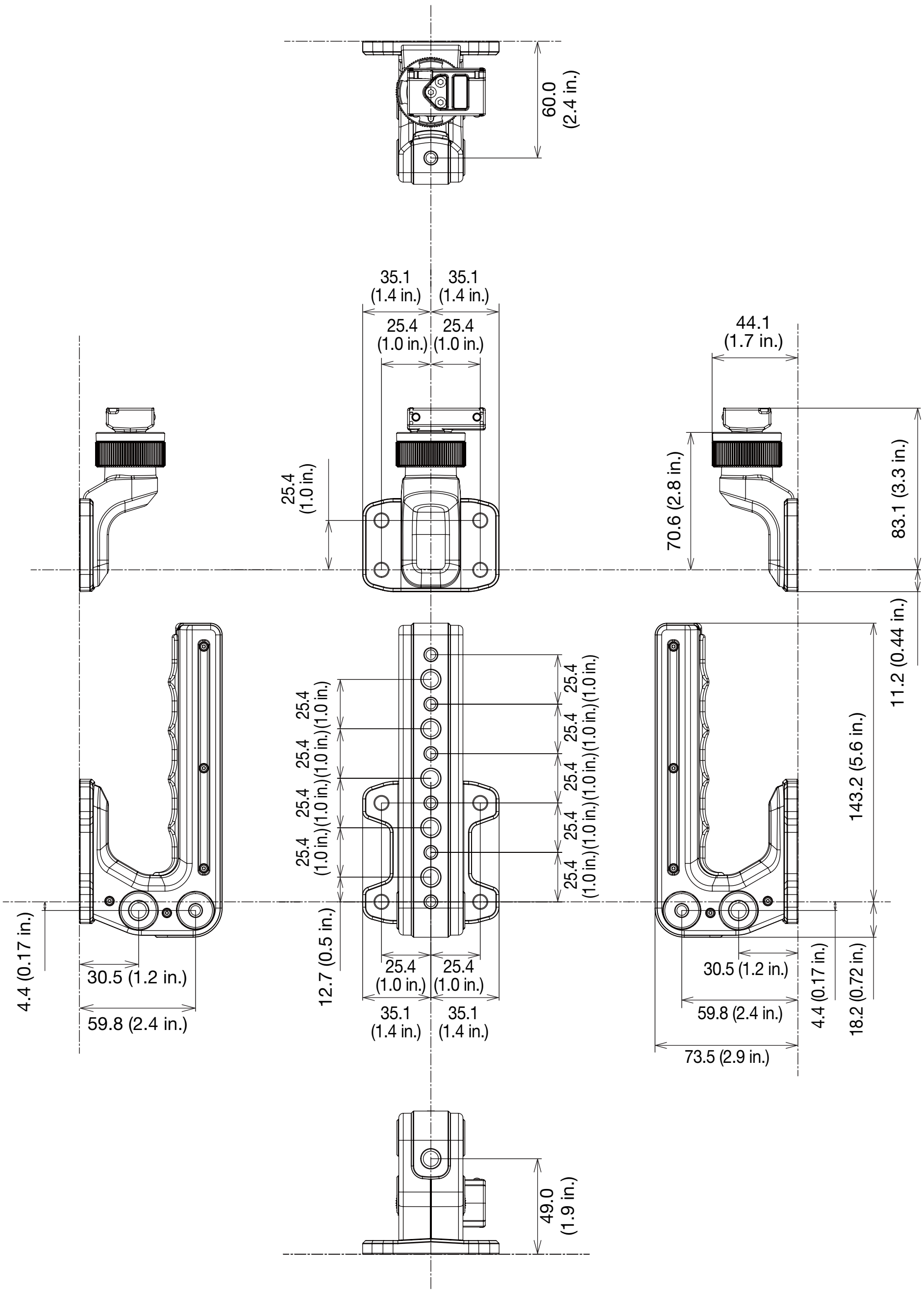
Right side view (with accessories)



Microphone holder



Handle unit and clamp base



Approximate Recording Times

Recordings on the CFast card (XF-AVC clips)

Bit rate	64 GB	128 GB	256 GB
[810 Mbps Intra-frame]	10 min.	20 min.	40 min.
[440 Mbps Intra-frame]	15 min.	35 min.	75 min.
[310 Mbps Intra-frame]	25 min.	50 min.	105 min.
[225 Mbps Intra-frame]	35 min.	75 min.	150 min.
[160 Mbps Intra-frame]	50 min.	105 min.	210 min.
[50 Mbps Long GOP]	165 min.	335 min.	680 min.

Recordings on the CFast card (ProRes clips)

Resolution	Frame rate	Codec	64 GB	128 GB	256 GB
4096x2160	29.97P	ProRes 422 HQ	5 min.	15 min.	35 min.
	24.00P, 23.98P		10 min.	20 min.	40 min.
	25.00P		10 min.	20 min.	40 min.
2048x1080	59.94P	ProRes 4444	10 min.	20 min.	40 min.
	29.97P		20 min.	40 min.	85 min.
	24.00P, 23.98P		25 min.	55 min.	110 min.
	50.00P		10 min.	25 min.	50 min.
	25.00P		25 min.	50 min.	105 min.

Recordings on the SD card (XF-AVC Proxy clips)

Bit rate → SD card capacity ↓	[35 Mbps Long GOP]	[24 Mbps Long GOP]
16 GB	60 min.	85 min.
32 GB	120 min.	175 min.

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   When a “work that uses the Library” uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.
   If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)
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• avr-libc

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- e2fsprogs

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- iputils-ping

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- libncursesw5

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- modutils-initscripts

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- run-postinsts

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- udev-extraconf

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- util-linux

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- zlib

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